066-2

DUAL HARLEY ISSUE! INSIDE THE NEW MX 250

VOLUME 13, NUMBER 9
SEPTEMBER/1977 PDC $1.00

MODERN CYCLE

The Racing Magazine

CHALLENGE PUBLICATIONS, INC.

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CAN-AM & MR TWO PATHS THROUGH THE WOODS

SUZUKI'S SMALL CALIBER BULLET

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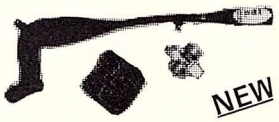

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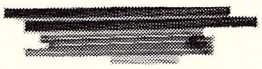

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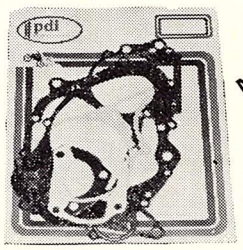

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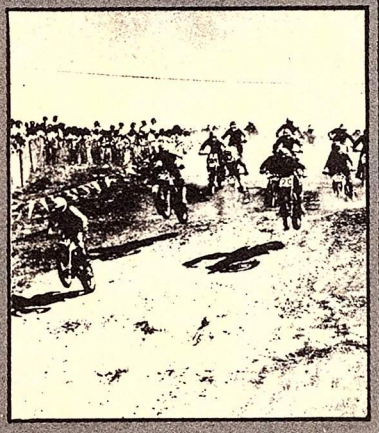

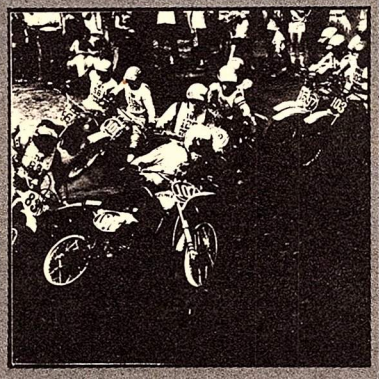

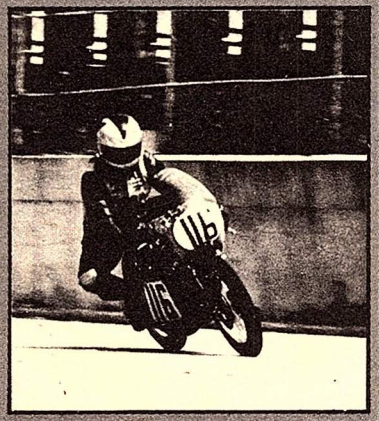

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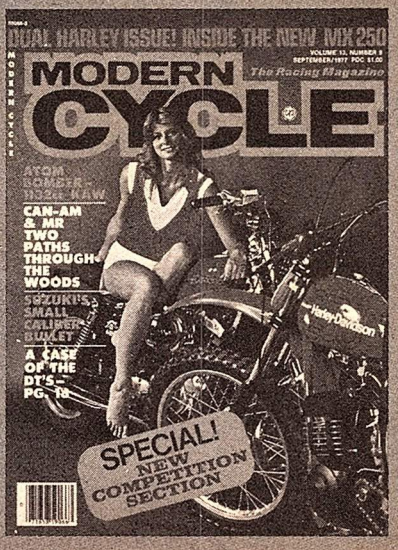
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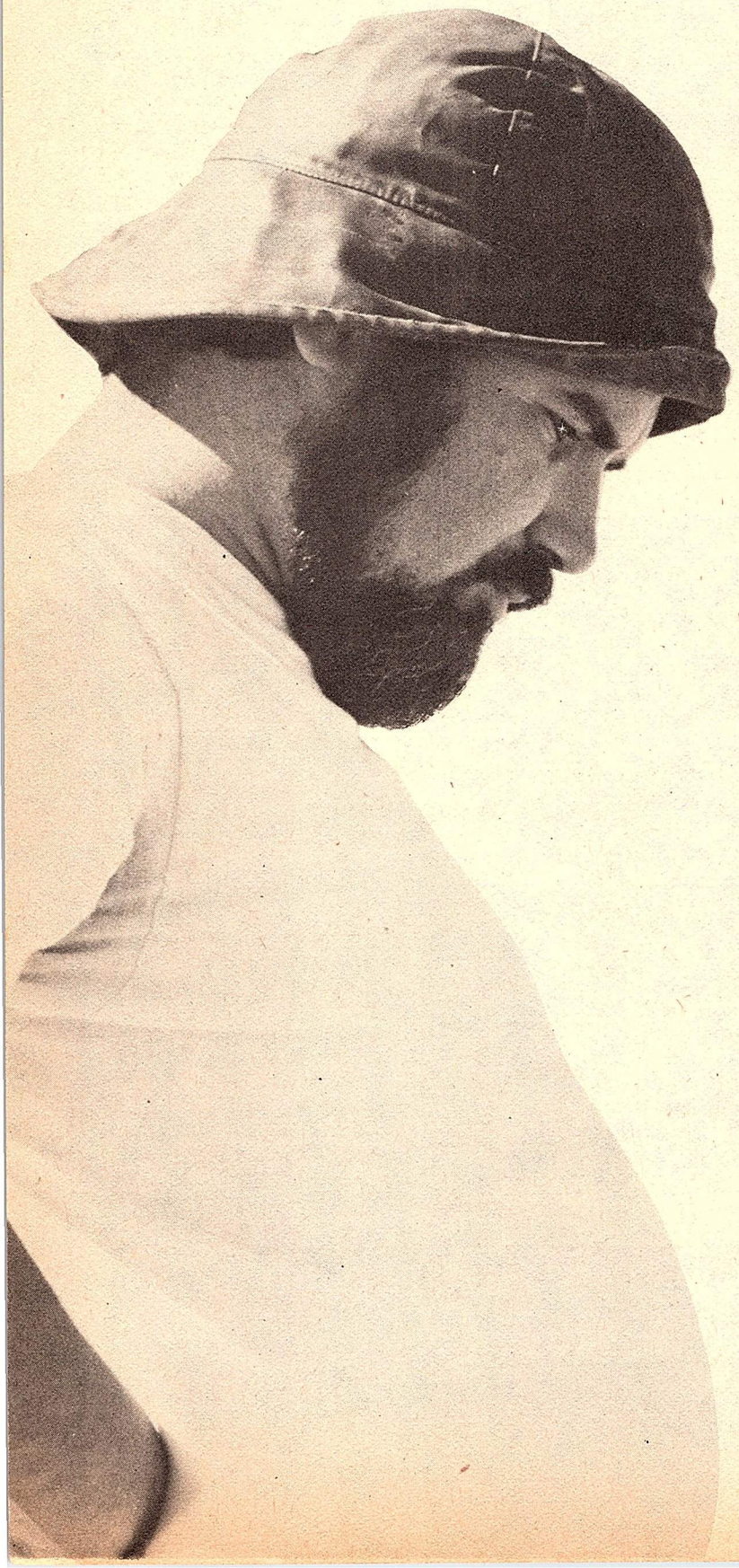
STROKIN'IT

BY NED OWENS



Modern Cycle, that's a motocross magazine, right?

Well, sort of. You see, in the beginning, magazines featured stories on all types of motorcycling. But then someone decided to make specialty magazines for motocrossers. Of course, there were also specialty magazines for road racers and drag racers and just about every other type of bike freak. *Modern Cycle* became one of these specialty magazines and catered mainly to the MX crowd.

As a leader in the competition oriented field, *Modern Cycle* covered the technical aspects, race reports and track tests in depth. (Spearheading this competition was Rick, who is moving to another post in the publishing field. Occasionally we may still hear from him by way of feature articles.)

This attention to detail has created a loyal "hard core" following. But the magazine lacked some of the ingredients to make it stand above the pack. Outside this narrow scope, there were a lot of readers with not quite the fanatical following—and they told us so. We were leaving out too many areas of interest to many motorcyclists.

And we *listen* to our readers.

Modern Cycle is now in the process of changing. We feel that although there is much interest in motocross, there is also a growing interest in other forms of high performance motorcycling. What this means is that we are going to start getting into the street performance, enduro/cross-country and flat track areas of the motorcycling world, too.

About this time many of you hard core motocross freaks are probably throwing your hands up in the air and saying, "Oh gag! They're going to ruin *Modern Cycle* with a bunch of foo foo bikes! Those stupid !*;:.&(;*, etc."

Fret not.

What we plan for *Modern Cycle* is not to soften the in-depth coverage of motocross that already exists, but to expand the overall out look of the magazine.

The new *Modern Cycle* will range from the mini to the muscle bikes and most every two wheeler in between. But don't expect to see a test on the Utilitarian MK III 50cc commuter bike. Performance whether on the street or dirt, will still be the tone of MC. Technical articles that will make your bike handle better, run better and longer, and help you maintain your particular machine the proper way.

Who knows, you might just be a closet road racer or drag racer hanging out with the motocross crowds?

We're changing the face of the magazine. Look for new columns, more pages and the "Sport" section with coverage of many competition events.

Jeff Peck, formerly of *Street Bike* magazine, will bring with him his vast experience in the street performance and road racing scene. Welcome him, please.

Motorcycling is a lot of fun. There are more bikes to have fun with than you might know about. We're going to leap into all of the performance sides of motorcycling. We're not going to be another follow-the-leader type mag.

If you like motocross, great! We're going to actually have more motocross than before. But just by chance, maybe you'd like to go up in a cloud of tire smoke rather than dust.

Performance! If you want it, *Modern Cycle* is going to have it! ●

huh?

By Jeff Peck

A TESTIMONIAL

There's no doubt about it, I like to get my money's worth when I buy something. This is especially true when it concerns something for motorcycling, whether it be parts, service or instruction. I can tell when I've gotten ripped off and it makes me mad. When this happens I tell as many people as I can about the item or the company that is dealing in shoddy merchandise.

On the other hand there are many times I come across things that are definitely worth the money spent on them. At these times I don't mind telling as many people as I can about this very good item. Right now I'm going to tell you about something I feel is very good and just might be worth much more than you have to pay for it.

What I'm referring to is the Kieth Code Rider Improvement Course. I recently took the course and will firmly attest to the fact that it's worth every single penny I layed down for it. It made a noticeable difference in my abilities as a rider and gave me all of the tools that I'll need in the future to continue to improve my riding skills.

In case you didn't see the article we had on his course a few months ago, let me fill you in. There are two different segments to this course. The first is the Basic Riders Course. In this section you are basically learning about how to think and look while you're on your bike. Don't try and tell me that you're doing just fine and are thinking very well when you're riding. There are many things that you don't see. Believe me.

I found after I had taken the Basic Riders Course that I felt more comfortable while riding and much more confident with my abilities to handle situations when they arose. Now I know deep down inside you might feel that your riding ability is second only to Kenny Roberts or Mike Hailiwood, but this course is designed to make you even better. If you want to, look at it in the sense of making yourself better than Roberts or Hailiwood.

Another thing about the Basic Rider Course is it makes you a much better street rider. If you feel like you tense up just a little bit when you get on your bike to go for a ride, it could be because there is something that is bothering you about riding or there is some operation of the bike which is unclear. This course is designed to get you over these humps and make motorcycling a much more enjoyable experience.

At this time the Basic Riders Course is only $25 and for the amount of experience you gain, it is well worth it. All of the instruction is done in a classroom atmosphere with Kieth working with you. What he stresses is that you fully understand the material set in front of you. This may sound like a roundabout way of getting at riding, but through this understanding of the material and doing demonstrations you suddenly find yourself understanding things about motorcycling you had taken for granted.

The next step in the Rider Improvement Course is the Qualified Riders Course. This section is designed with road racing in mind, but many of the things you will learn will make you a much better street rider. Also something you pick up along the way just might save your life.

There are two parts to this section. The first is much like the Basic Riders Course in that you are working on written material and demonstrations to make sure you fully understand what is going on in the course. The only difference in this particular case is that the material is much more technical and deals with approaching problems on the track, how to solve them, understanding the track and seeing what is going on while you're riding.

The next section of the QRC is out on a race track. This is the ultimate demonstration, applying what you've learned in the classroom. This is relatively easy because you now have all of the tools that you need to recognize and work on the problems you might have with a particular section of the track. Everything seems to clear up.

After taking both sections of this course I felt much better about riding and felt I could be more competitive. However I didn't get a chance to really try it out until the weekend of the AFM 6 Hour Production race. There were sprint races on Saturday and then the 6 Hour on Sunday.

At the beginning of Saturday I found that I felt much better on the track and many of the things that had bothered me before were gone. By the end of the day I had also knocked five seconds off my lap times. I thought this was amazing, it wasn't hard to do. Also I found many portions of the track that had been real problems were now very simple.

The big test came on Sunday. Kieth had set a goal for me to shoot for and when I had first seen it I was sure it was impossible. But Saturday's success made me feel much better and during my first riding session in the endurance race I was able to exceed this goal by two seconds.

I was turning lap times which only a few weeks before I was sure were out of my reach. I now feel much better on the track and I'm able to pass slower riders without any trouble.

Kieth Code's Rider Improvement Course made me a thinking rider. The important word in that sentence is *THINKING*. When you are a thinking rider you can see the track and it becomes much larger to you, this opens up many more lines to you and thus improves your times and your chances of winning. A thinking rider also has more control over his machine and is able to understand what it is doing, this ability will help to keep him out of trouble and might help to keep him from crashing. A thinking rider is also more relaxed and can handle things as they come along. If you're tensed up your reaction time is going to be longer and even then what you do in reaction just might be the wrong thing.

As I've said all of these things that work well on the track also apply to riding on the street. In many cases it's even more important to be thinking while street riding. You may not be dealing with the high speeds, as on a race track, but on the street you have more dangerous obstacles like cars.

If you want to enjoy riding more than you do now, or if you want to start racing and get off on the right foot the best thing you could ever invest your money in would be the Kieth Code Rider Improvement Course. Even for you guys who've been riding for a long time could learn something from it. I'm glad I took the course, it's made me a better rider, much better.

For those of you who are interested give Kieth a call at (213) 463-6594. ■

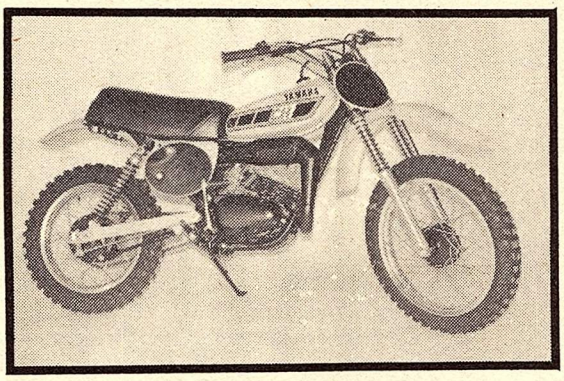
CH

THE NAME OF '77!

PERFORMANCE PRODUCTS

CH Mini Racer

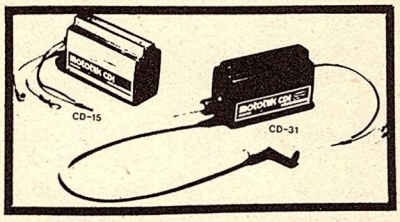
RM 125 B Racer 1795.00



CR 125 M2 Racer 1795.00

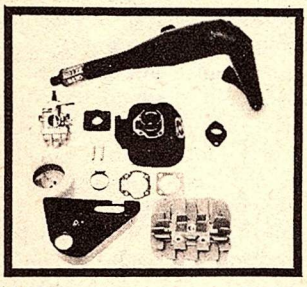
YZ 80 or RM 80 1495.00

Moto Tek



All 59.95

Bolt on Engine Kits



Kits Include:
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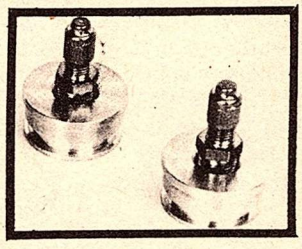

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POST ENTRIES

Regretfully, I inadvertently failed to give credit to Bobi Scott of Cycle News West for some excellent reporting on the Speedway Nationals covered in MC. Sorry.

Ned

TALBOT ADJUSTMENT

Rondo Talbot's Editorial in July's *Modern Cycle* says the motorcycle accessory marketplace is still in the dark ages. Those of us in that business don't know a Rondo Talbot, and we'll bet that he hasn't checked with any of us about how we *do* develop our pipes.

Rondo names a couple of brands he likes, then invites people to sue us. Sure *some* manufacturers don't test their stuff, but Rondo didn't name any of them. What's he trying to prove?

My company stands behind its products. We race tested our new YZ 125D pipe recently at the C-H Indian Dunes NMA Nationals. Lenny Geiger won the 125 modified class with it. Dyno testing can show anything, and the results depend on what you're shooting for. We think it makes more sense to test the 1 or 2 percent of pipes returned on a bike, before making adjustments.

Pipe down, Rondo.

Stanley A. Doerr, President
C-H Performance Products
Canoga Park, Calif.

RD350 Wires

I would be most appreciative if you could help me with a problem I have encountered while rebuilding my Yamaha R-5. It is an R-5 with RD350 top end. While I was going over the electrics, I accidently removed a plug (3 way) on the end of 3 white wires leading from the alternator stator coils. My problem is now which wire goes where? I have access to all types of test equipment (VTVM, scope, etc.) but have no info on the wiring.

Paul Pedersen
St. Lambert, Que.

The wires you disconnected go from the stator charging coils to the rectifier. These three white wires cannot be connected improperly. All three wires do the same job and as long as they are white to white, they are correctly installed. If you have an owner's manual it should have a wiring diagram in the back. If not, a trip to your dealer might find a shop manual.

R5C Hop-Up

I have a 1972 Yamaha R5C and would like to know how to hop it up or to write to someone about hopping it up.

Phil Gifford
Rensselaer, Indiana

I would start by installing the heads, barrels, pistons, carbs, and transmission from an RD 350. This should be used with a good set of quiet exhaust pipes. Then install a CDI ignition. If this is not enough for you then I would write to:

HTW RACING SERVICE
202 STEVENS ST. (UNIT C)
SANTA ANA, CA 92707

They can supply you with expansion chambers, porting, bigger carbs, CDI ignition, etc. They also race RD 350 Yamahas.

A Matter of Degrees

I am writing to find out if someone publishes a book on cam timing Honda and Kawasaki four-stroke motors. Your help would be appreciated.

George Dan Davis
Scotch Plains, N.J.

One of the best sources on cam timing is the automotive industry. I would write to:

ED ISKENDERIAN RACING CAMS
16020 S. BROADWAY
GARDENA, CA 90248.

Cam timing and degreeing is done the same for car motors as for bikes, and these fellows have been at it for many years.

Where To?

I own a 1972 Kawasaki H-2 and am interested in putting a DENCO 149 Ultra Cobra motor in it (as per April '76 edition of your mag). Could you tell me their address so I could write and ask about the feasability of such a thing?

Richard McKerrow
Sudbury, Ont., Canada

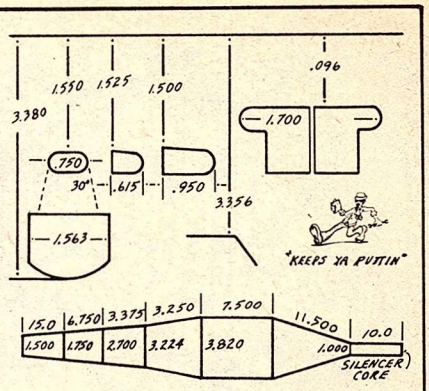
Denco Industries has just moved to a new facility to better serve their many new customers. Their new address is:

DENCO INDUSTRIES, INC.
4543 ENTERPRISE STREET
FREEMONT, CA 94538

Looking For You

Very interesting article on the tire comparison, but where is part II? Not in the April *Street Bike* that's for sure. For those who may have lost part I, I have sympathy. Many more may be minus part I for reference when part II shows on the *Street Bike* pages. I'm quite anxious for the conclusion particularly the wet road test.

(Continued on page 76)



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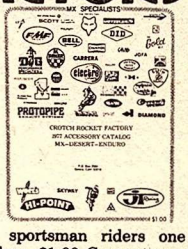

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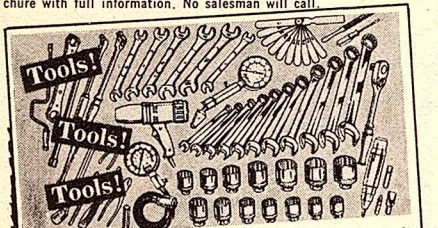

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TRUTHS, HALF TRUTHS, POSSIBILITIES AND OUTRIGHT LIES

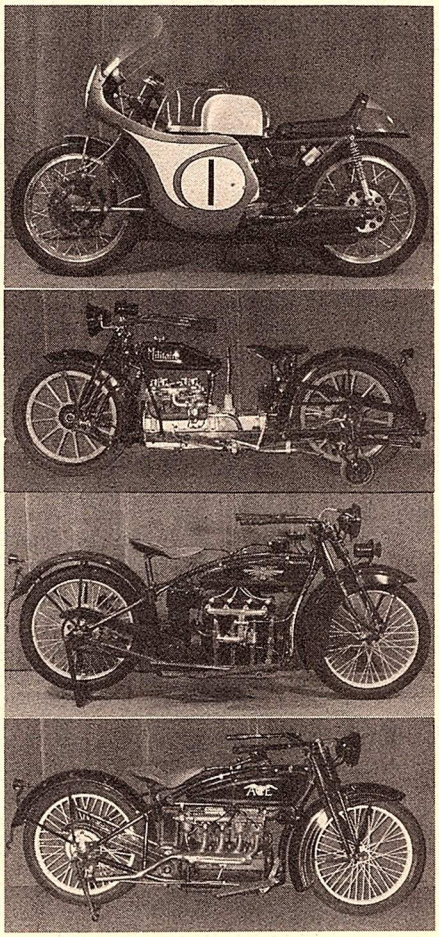
HEDY STUPH

Peter Frank of the WERRA has announced the reorganization of the racing organization to also serve road riders. Along with the new organization it was announced that Leonard Lesser will head up this portion of the WERRA.

* * *

All of you riders out there with your eyes glued on the tube might be interested to know that the Motorcycle Safety Foundation is releasing a series of film clips to TV stations across the country. These ads will be aired as public service ads, much the same as the announcements by the American Cancer Society.

* * *



These four bikes were recently shown in L.A. and are part of the famous Harrahs Automobile Collection. The road racer is a Honda, vintage 1960, a 1924 Ace, a 1925 Henderson and a 1914 Militaire. If you get into the Reno area it's definitely worth a trip to go see this famous collection of motorcycles and cars.

For those of you who are interested about the WERRA you can write to WERRA, Box 387, Valley Forge, PA 19481. They will fill you in on all the inside information.

* * *

A mistake in the hallowed pages of *Street Bike* magazine? Well, yes. We are human you know. This minor faux pax occurred in the article on Specialists II, the guys who build super fast RDs. It seems that their address is actually 5419½ Denny Ave., Hollywood, CA 91601. Sorry about that guys.

* * *

Some other big news here from the WERRA is the sponsorship by Laverda of the WERRA's National Endurance Series. The winning team will receive a brand new Laverda 1000.

* * *

For those of you who think Harleys are not performance bikes, you should be surprised to hear that recently a Harley-Davidson Black Knight was clocked at 12.79 in the quarter mile. It's real narrow too, with lots of ground clearance.

* * *

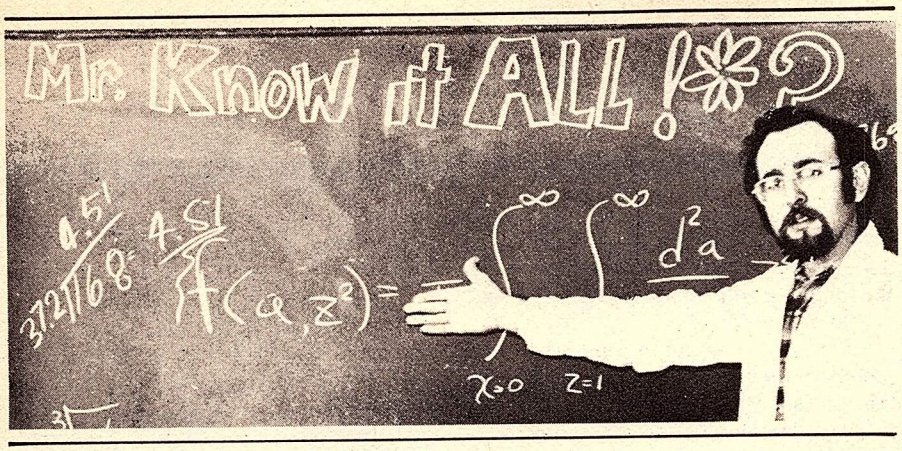
What could more startling than a merger of Ducati and MV Augusta? How about the purchase of these famous motorcycle firms by the owner of Benelli and Moto Guzzi, Allessandro De Tomaso? The only thing standing between the yes and no on the purchase is the $6 million in debts that Ducati has.

* * *

Giacomo Agostini is dabbling in the motorcycle construction field. It seems that he is building an "Agostini Special" around a 120 hp engine and relying heavily on groundwork done on the Suzuki RG500. If everything goes well the bike just might see the light of day in the 1978 Grand Prix season.

* * *

Something else you might want to take note of. In a recent article on valve shimming for multi cylinder dual overhead cam motors we had a picture of a shim being held by a magnet. Do not do this while you are installing the shims in a motor. The shims are very easy to magnetize and this could cause them to be spit out. Instead of a magnet use a pair of tweezers. ■



By Vic Krause, MCs Midwest Editor

CYCLONING

Dear Mr. Know-It-All,

I own a '74 TM-400 Suzuki and I would like to know what measurements I should use to lay the top shock mount down for cantilevered suspension. My weight is 175 pounds. Which shocks and springs should I use? I would like to use a pair of Fox Shox. What do you suggest?

Randy Hogue
Gilroy, CA

Use either metric or English measurements—your choice. About 7.5cm or 3.0". Fox Shox work. Use 88/165 pound dual rate springs.

FOUR COIL

Dear Mr. Know-It-All,

I am the proud owner of a 1976 Yamaha MX 100. But I've one problem, the oil in the front suspension leaks out. I've tried different kinds of oil but nothing works, what should I do?

Jackie Hamilton
Clinton, NC

The answer is so obvious it hurts. Either replace the fork seals, preferably the universal accessory leakproof variety, or discontinue using oil or riding.

RIFF RAF

Dear Mr. Know-Nothing-At-All,

I just read your letter column in *Modern Cycle*, the March 1977 issue. Your answers to every one of the letters in the column all make the people sound as if they were a bunch of numb skulls.

I'll have to say the letter about applying for a patent on grooves in the slider might be stupid, but it still took a little bit of nerve to suggest it.

You are asked straightforward simple technical questions and you come out with an answer totally stupid. You're just one loused up Mother! What more can I say?

Happily and Never yours,
James Bentley Newman III
R.A.F. Upper Heyford,
England

Your letter poses a valid argument for discontinuing international delivery of mail to and from Great Britain. Tell me, Newman III, isn't it a bit more than coincidental that the fellow you have chosen to stand up for also graduated as a Ph.D. from Upper Heyford University. Honestly, it seems to me that you would be better off to channel your energies into more worthwhile pursuits, like keeping your country from going down the economic tube, rather than sending your limp mutterings across the Atlantic and wasting my time.

BEARING STRAIT

Dear Mr. Know-It-All,

I own a '76 RM-125A, and I have a few problems you guys can help me with. How can you prevent the top end bearings on these bikes from going? It's getting a little expensive. I run at 35:1. It says to run 20:1 but that's bull. Are the B models faster than the A's? Thanks for your time.

Barry Laurin
Thunder Bay
Ontario, Canada

Make sure you are replacing the upper rod bearing and the wristpin also at the same time. Life is an average of about eight amateur races on these components. A 35:1 ratio is fine if you are using a synthetic or a concentrate, but 20:1 or 24:1 is recommended for a mineral base oil. The "B" models are a tad faster as you should have known.

If you would like to ask Mister Know-It-All a question, just drop a line to MISTER KNOW-IT-ALL, c/o MODERN CYCLE MAGAZINE, 7950 Deering Avenue, Canoga Park, California 91304.

LOP

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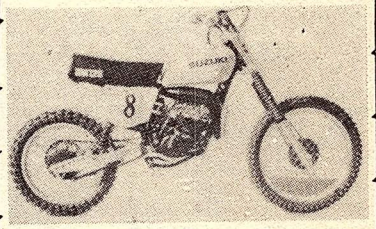

Suzuki RM125B package $1495

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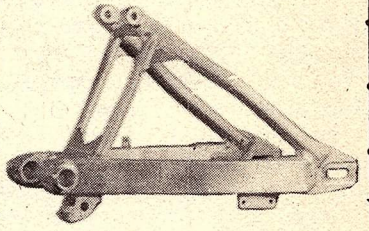

YZ125-400D Tri-Arms $159.95
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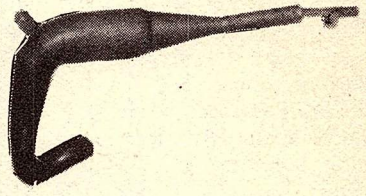

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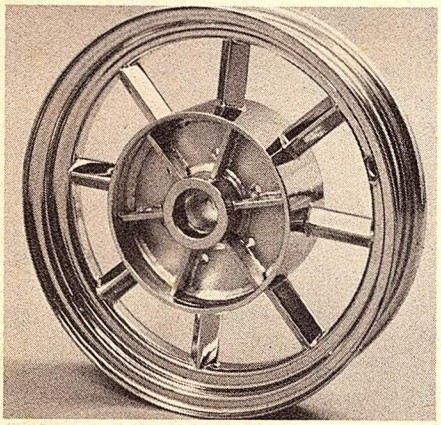


"Z" APPEAL

Hallcraft's new bolt-on Gallaxy all-steel street wheel is now available for the Kawasaki KZ 900.

Bolt-on Gallaxy wheels for the Kawasaki KZ 900 are available in both front and rear models and can be used with existing brake and axle components.

Featuring Hallcraft's famous high styling and show-quality, deep chrome finish, the bolt-on Gallaxy for the KZ 900 boasts eight square spokes and a large diameter hub. This unique design provides strength and protection against wheel breakage. Welded wheels, because of their one-piece construction, are inherently stronger and more durable.

Backed up by rigorous quality control standards, each Hallcraft's bolt-on Gallaxy wheel is engineered to run true with proper alignment, run-out and concentricity for maximum tire life, ease of balancing and optimum performance.

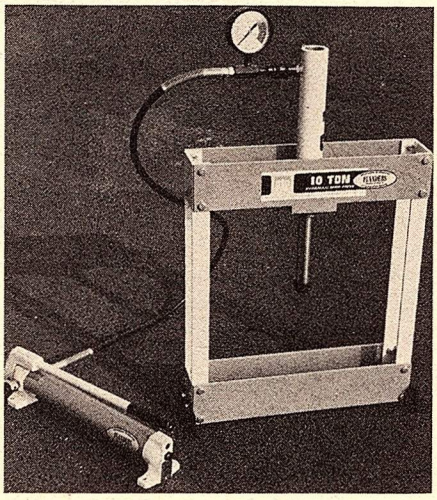
For more information about bolt-on Gallaxy wheels and Hallcraft's complete line of hubs, wheels, brake kits and spokes, contact your nearest motorcycle and accessories dealer or write Hallcraft's directly. For a full color catalog, send $1.50 to Hallcraft's Industries, Inc., Dept. SB, 232 Millar Avenue, El Cajon, CA 92020.

PRESS ON

The latest from Flanders is this nifty hydraulic press. Ten tons of capacity makes this press just about right for most motorcycle applications such as straightening fork tubes or repairing crankshafts. The ram travel is up to a maximum of 10 inches and the width between the uprights is 18 inches which is just what is needed at most bike shops.

Flanders part number for this unit is OT-Y110A which means absolutely nothing unless you want to write them and find out more information about the press or the many accessories that are available for it.

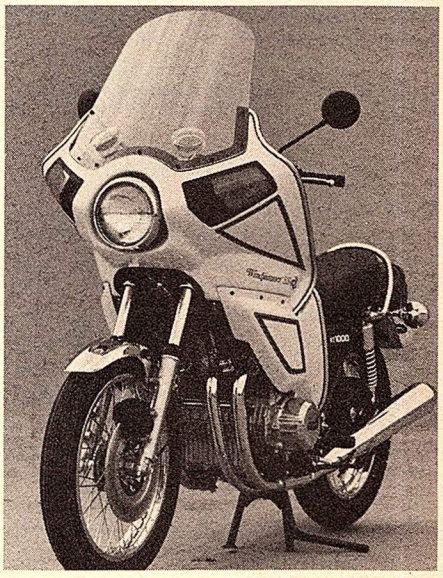
The ram and pump unit are completely removable and will easily double up as a portable power unit for frame straightening or any other trick uses that you may have for this double duty piece of equipment. For more info write: Flanders Co., Dept. SB, P.O. Box 2297d, Pasadena, CA 91105.



FLAT BUSTED!

Designed for the dirt and dual purpose bike rider, ACP FlatShield will protect against most flats in tube or tubeless tires, aid in balancing, not rust or corrode steel or magnesium or aluminum wheels while sealing rim leaks in the process. Not only that, but it also won't interfere with patching nor will it dry out or ball up. ACP is safe for skin and clothing, and, of course, it's not harmful to rubber. It comes in three sizes and three prices and is available from:

ADVANCED CYCLE PRODUCTS
3633 W. MacArthur, Suite 410
Santa Ana, CA 92704



SS JAMMER

The remarkable new Windjammer SS from Vetter Fairing Company has built-in Leading Edge Lights, adjustable headlight and a lockable/pocket tonneau set as standard features. New options include dual car horns, color-matched striping and Windjammer Lowers.

See your local authorized Vetter dealer for further information.

WASHING MACHINE

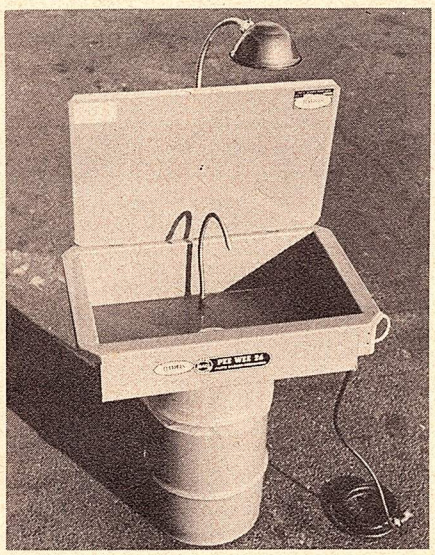
New from Flanders's is something we all want but most of us don't have. Right, Supe? This parts washer is probably the most handy thing you could possibly own, not to mention being worlds safer than washing your lower end out in an open tub of gasoline. Why, there's even a few solvents available that are practically non-flammable, if you know where to look.

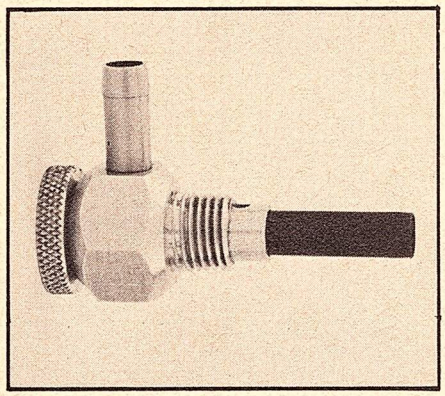
But it's too expensive you say? We say: How much is all your body hair and skin (at the very least) worth? Couple bucks? Could've fooled me? Take *care* of that investment. Think of how good you'll feel knowing that you're not leaning over a potential incendiary bomb.

Enough jabbering. More informa-

tion can be had by writing to the address below.

FLANDERS CO.
Dept. DR, P.O. Box 2297D
Pasadena, CA 91105



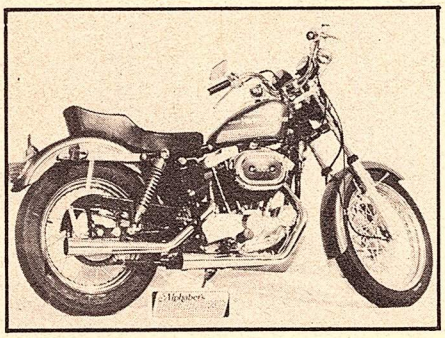


RESERVE VALVE

This reserve valve is designed for gas tanks fith 1/4″ pipe thread fitting and a standard 5/16″ hose adaptor. Twisting action features On-Off and Reserve in a very compact 7/8″ total length from bottom of tank to bottom of valve to handle any clearance problems you may have. Made of corrosion resistant aluminum.

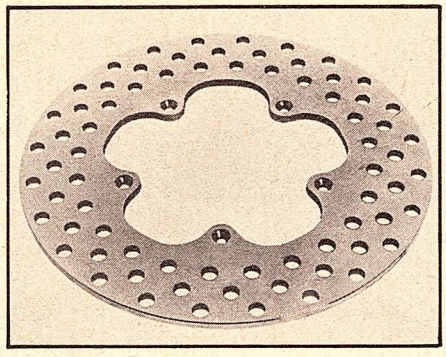
The valve is also now available for Kawasaki and 1975 and up H-D gas tanks. This style valve features high volume ID and two 5/16″ hose adaptors on the Kawasaki style and your choice of hose adaptor (5/8″, 1/2″, 3/8″, 5/16″, 1/4″) on the H-D gas tank model.

For more information on these and other Quality Performance Products write Motorsport, Inc., P.O. Box 831, Palatine, IL 60067 or call (312) 359-4990.



MILD TO WILD HEADERS

Alphabet, leading manufacturer of replacement pipes, mufflers and exhaust systems for the street and touring rider now offers a complete line of exhaust systems to include Harley-Davidson, Honda, Suzuki, Kawasaki, Triumph, Norton, BMW, and Moto Guzzi. All beautifully chrome plated and expertly engineered. Complete catalog of parts and accessories available. $2.00. Alphabets, 12572 Western Ave., Garden Grove, CA 92641.



HI-PERFORMANCE DISC BRAKE ROTOR FOR HARLEY-DAVIDSONS

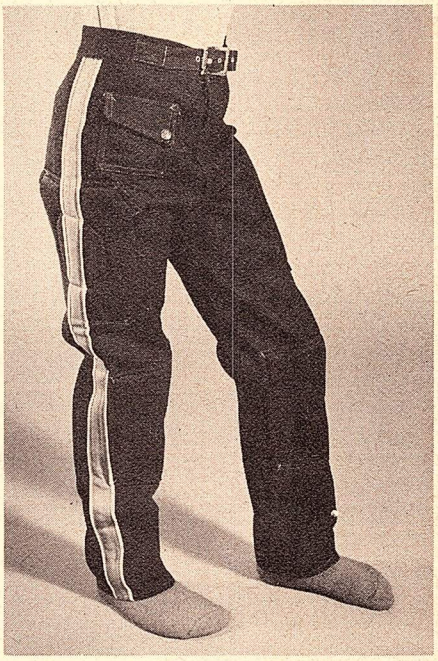
Tired of scarred and gouged stamped steel discs? Replace your Harley disc with a Performance Machine meehanite disc; for all Harley-Davidson FX and Sportsters, 1974 and later. No modifications needed, simply bolt on. Retails at $48.50.

This all new nickel-plated disc brake rotor from Performance Machine is cast from meehanite, a substance that dissipates heat rapidly and gives the highest coefficient of friction between the disc and pads. Precision blanchard grinding insures the disc to be flat and parallel with no warpage.

The disc is drilled for lightness and added heat dissipation, the holes also work to displace water and dirt that can become trapped between the pad and disc surface.

Performance Machine manufactures a variety of discs, all in cast meehanite and available drilled.

For more information contact: Performance Machine, 16248 Minnesota, Paramount, CA 90723.



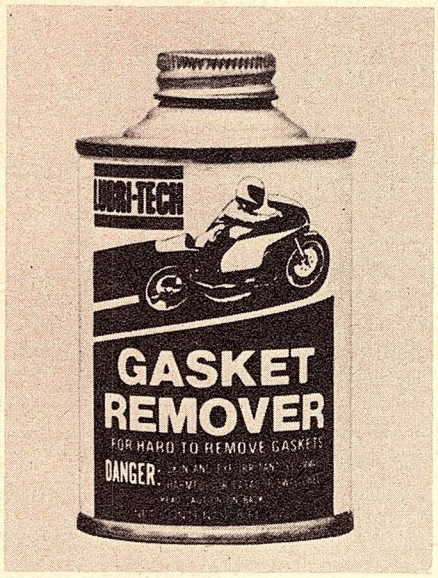
DENIM MOTORCYCLE PANTS

BIG 4, INC. has an outstanding value in their tough denim motocross pants. They are designed for street, track or trail wear. They are cool-wearing and comfortable, double reinforced and stitched at all stress points. Constructed from super heavy duty, 100 percent cotton denim that's preshrunk and machine washable. Pictured here is the standard denim design with snap key pocket, inside-sewn padding and attached belt and buckle. Big 4 has a complete line of denim motocross pants starting with the Standard Dynamite Denims priced at only $14.95. Sizes 22-38.

BIG 4, INC.
W. 1012 Railroad Ave.
Spokane, WA 99204

MECHANIC'S HELPER

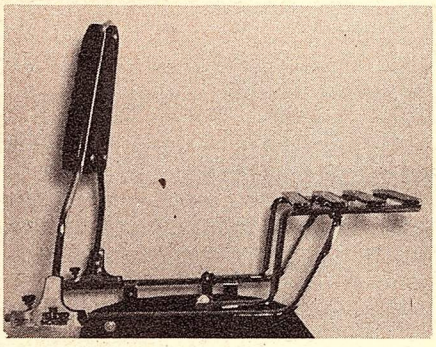
Lubri-Tech Products offers an alternative to bruised and banged-up knuckles with the introduction of a



newly developed liquid Gasket Remover. No more scraping and scarring of hard-to-remove gaskets and hard-to-replace knuckles. Simply brush on a thick, even coat of Lubri-Tech Gasket Remover. It penetrates and loosens most baked on, hard to remove gaskets, while it dissolves varnish, gasket particles, and residue. It also ensures a clean surface for a proper seal when applying new gaskets.

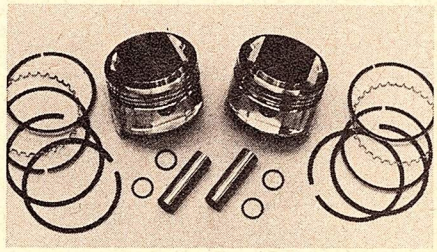
Lubri-Tech Gasket Remover is available in 8 oz. Brush-Cap containers. For more information, contact:

LUBRI-TECH PRODUCTS, INC.
7106 Barry Ave.
Rosemont, IL 60018



AAAJUSTABLE

THE SSSLIDER BACKREST (T.M.) uses an innovative approach; the design combines comfort with full adjustability in the backrest and carrying features with the matched luggage rack. The backrest has 20 inches of adjustment on its own framework and does not depend on the luggage racks for strength. The four-point attachment is directly mounted to the frame eliminating mounts on the fender or taillight. Thumb-screws fix backrest adjustment; the screws are nylon-tipped to prevent marring the finish. Basic construction is 9/16-inch SOLID hexagon steel and the metal is chrome plated. The luggage rack is finished in weather resistant wood. It will adapt to most saddle bags, touring trunks and touring custom seats. Retail price is $109.99 from your dealer or you may order from Dougdann Inc., 6444 17th Ave. S., Minneapolis, MN 55423.



BIG BORED

Trock Cycle Specialties, a leading supplier of high performance equipment for the Harley-Davidsons, announces their all-new 102 cubic inch forged pistons for the Harley 74.

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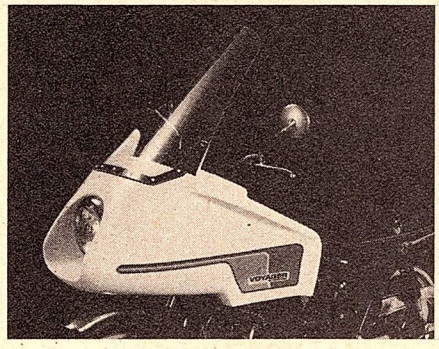
In stock and available now, these 3-13/16-inch pistons and cylinders are complete and ready to install with a compression ratio of 9 to 1.

For information on this and other Harley-Davidson related items, please write or call: Trock Cycle Specialties, 9540 Berwyn Avenue, Rosemont, IL 60018, (312) 678-3500.



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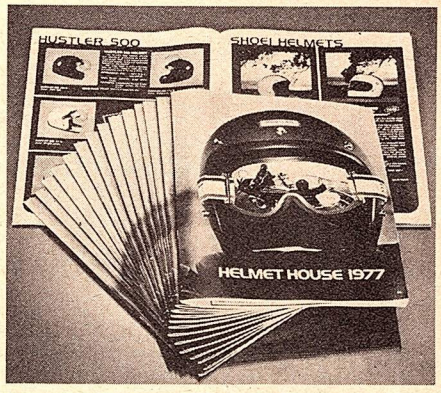
The new Voyager Sport fairing offers all of the advantages of the Voyager fairing, but is equipped with a conventional, high-efficiency one-piece windshield that provides more than adequate wind protection for comfortable touring.

The Sport windshield adds a sleek touch to the fairing, giving the rider the same smart styling and convenience as the Voyager, but with a substantial savings.

The Voyager Sport fairing is offered in white or black, and is available now from Rocky Cycle, through your local dealer.



1977 CATALOG

Helmet House, Inc. has just released its 1977 Award Winning Catalog.

This 64-page full color catalog is packed to the brim with the finest motorcycle accessories available. Whether you're into Touring, Motocross, Enduro, or just riding to work, this new catalog is a must have item.

To obtain your copy, send $2.00 to: Helmet House, Inc., 2115 Colorado Ave., Santa Monica, CA 90404.

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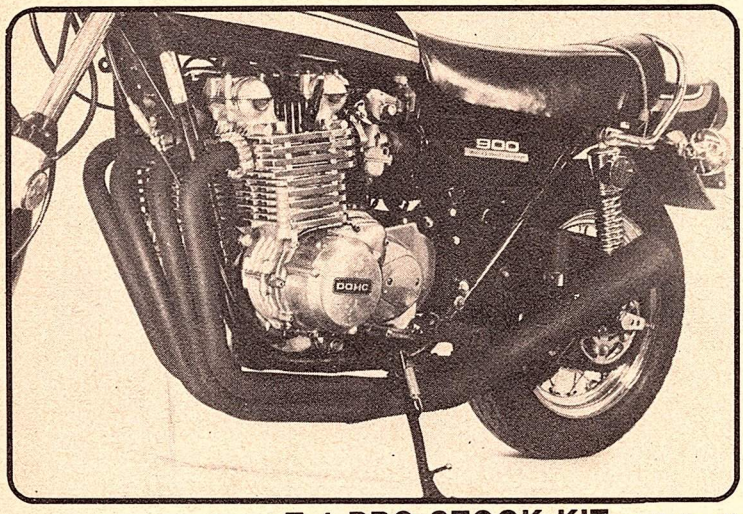

D&K designs, manufactures and tests all their race components on the strip to insure quality and performance when delivered.

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Most manufacturers build a pipe on a stock motorcycle and give facts like 15% H.P. increase, that is true and the pipe works well *on a stock bike* but what happens when that system is placed on a modified bike, is horsepower increased or decreased, who knows. D&K did their pipe building on a modified bike for drag racing 1042 cc with a 12½ to 1 compression - performance camshaft - carburetion and ignition. The results, a pipe built for racing not a pipe built for a stock engine but expected to work as a race pipe.

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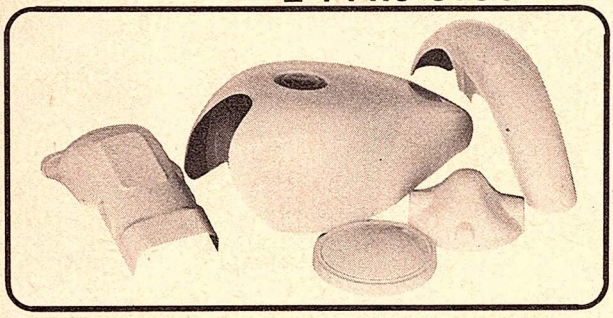

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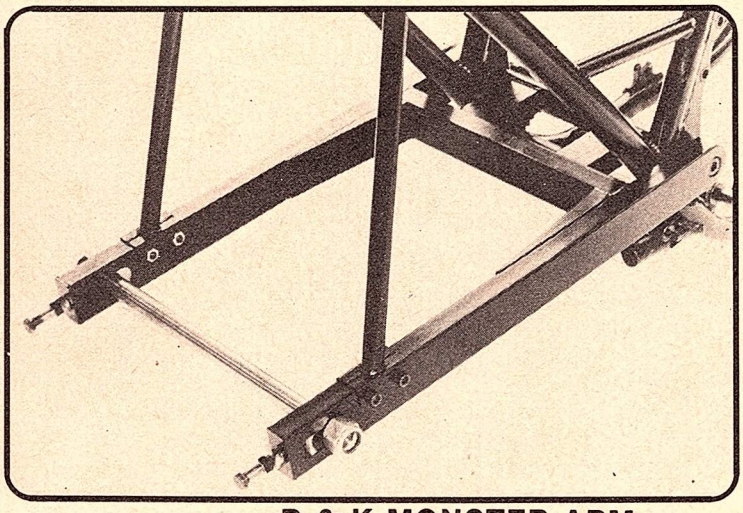

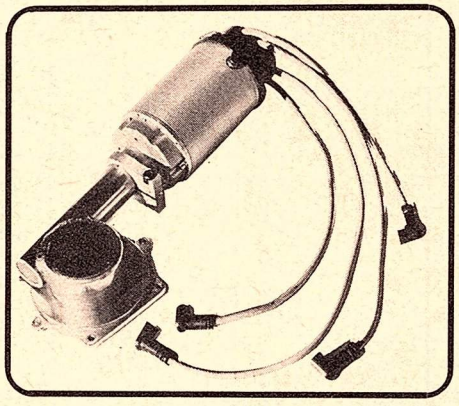

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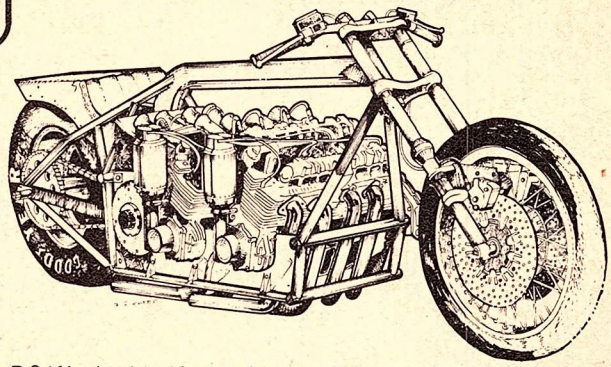

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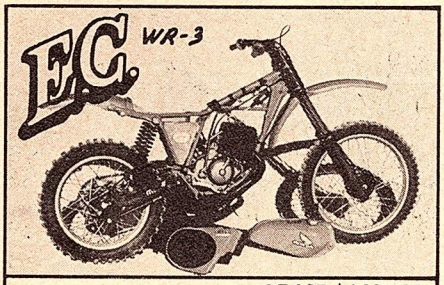

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Eastern Correspondents

BY CARL BERG

WITH AMBIENCE AT THOMPSON-IN-THE-RAIN

Foster's Lager—the beer of oblivion. By the time you've finished nursing one of these 25 oz. cans you're about ready to claim it as a dependent. Oooh—. It's Saturday and AAMRR's season opener at Thompson Speedway in Thompson, Connecticut. It is raining, something it does at Thompson with regularity. Not that rain is a problem for true blue roadracers of course, well, I have overheard hyperbolic statements to the effect that if there's roadrace anywhere else this weekend next year certain persons will be absent from the lineup here. Idle threats no doubt.

Since it's raining outside I have refuge in Rod Johnson's van. This has proven to be an intelligent move. Rod has the finest larder I've ever seen: all the munchies, crunchies and suckies—(burrrp) — you'd ever want. I'm scrunched up next to Yoshimura East's 550 Honda, not a contender this weekend because it's fitted with slicks, but there's Rod to talk to and all manner of people are stopping to say hello, so why leave?

This is the season opener. A large portion of the New England pavement set is here today: Mike Baldwin, Rich Schlacter, John Bettencourt all live nearby as well as Richard Chambers and Kurt Liebmann who travel a little further. Others haven't and so, despite the rain they're putting track time on new or refurbished machinery, determining how effective the ideas they pursued over the winter are. Interestingly, one racer speaks of this initial sorting out period in terms of "inputs"—noting how, as he takes laps, he tries things in a gradual manner to see what reactions his mount makes to them. A cautious, reasoned approach.

This line of talk leads me to ask Rod about the handling of his ZI Superbike. He's had problems you know, but then again so has just about everyone else. Rod says anyone who hasn't had handling problems with their Z isn't going fast enough, which may or may not be true. But at least it gives Rod a sense of companionship with other tuners.

I'm probably belaboring the whole thing too much but I'm fascinated by the Superbikes. The class is MY candidate for the All-American Motorsport, and I'm typically rabid about it all. Winning a superbike race this year takes good handling and something under a hundred honest horsepower.

But back to Rod: At Charlotte, not only was the wheel deflecting in the forks enough to leave rubber streaks on the fork legs but the brake discs notched the legs also. The outer edge of the disc is about six inches from the axle so there's something terribly wrong going on up front. Everything was tight at the end of the race, of course, but there were these notches.

What Rod plans to do to correct this is both intriguing and instructive. Understand now this is rapping in the rain and the ultimate solutions may turn out to be different but this is one of those points where reason and experience meet and therefore it's worth writing about.

As far as he's concerned the front end has to be made more rigid and as many things—as possible, is, tach, number plate, headlight (?) be taken off the

top of the forks and mounted to the frame isolating the front suspension from the liabilities, these components may be adding. This latter isn't nit-picking either, the world is a whole lot different at 140 mph.

For the forks themselves, Rod intends to engineer a set of 4 bolt caps to assure that the front axle will be rigidly in place. He then proposes to lengthen the steering neck on the frame so the triple clamps will be placed farther apart for some more rigidity topside. Also if the rules or those interpreting them allow it, his frame mounted oil cooler is going to grow a skirt in order to gain some negative lift.

While he's been talking Rod has also been keeping a watch on John Bettencourt. Through the rain streaked windshield we can see John on his GS750 Suzuki as he passes the pit gate. Clik-clik 1:31. The only figure I've been able to scrounge for Thompson's 1.6 mile's with bumpy straights is 1:18 in the dry. That's probably quick for this course though the record, I suspect, is under it.

The rain is lightening up some and I can see Steve Ross. Duty demands I quit this haven and get on with business.

Steve Ross is the President of AAMRR. In the day to day of living he's the Operations Officer of a New England bank. He's not compensated for his work with the Association beyond some expenses. I've been wanting to talk to him because he's the last of the 3 major figures in Eastern Road-racing I've yet to meet. He seems harried but can give me a few minutes.

The best description of AAMRR's outlook today is infrastructure. This is a new word, not in the dictionary and meaning organizational underpinnings or substructure, the things that make the thing work. Steve is another of those lucid, systematic fellows dear to the hearts of working journalists. He lays it out so well you don't even have to take notes.

For a racing organization you have to have a clear set of rules, a snarl free record keeping system, and a good track crew. To this end AAMRR has a 72 page handbook containing about everything you'd care to know, rules and otherwise. They have a plastic card system and enough talent to keep it working properly and they have a stable track crew with enough equipment and training to intimidate their opposite numbers in the sportscar set.

The workers have had seminars in first aid and helmet removal. In racing accidents helmet removal is serious business and if you don't know how—don't! AAMRR has footed the expense for their own communication's system so the corner workers are in contact at all times with the Chief Course Marshal. Radio etiquette is all spelled

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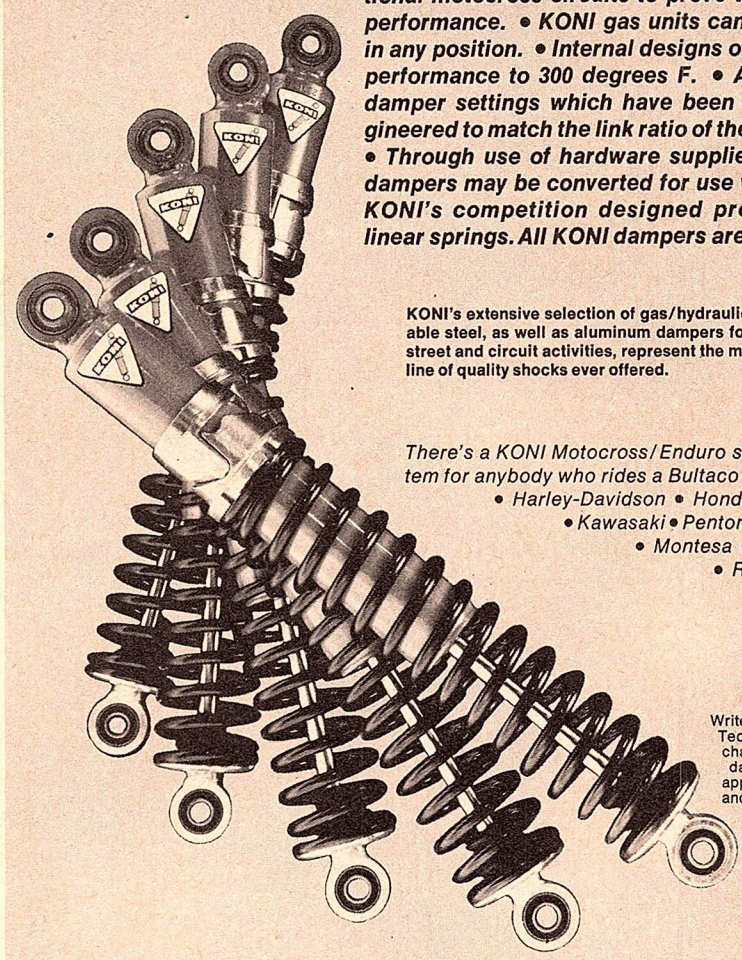

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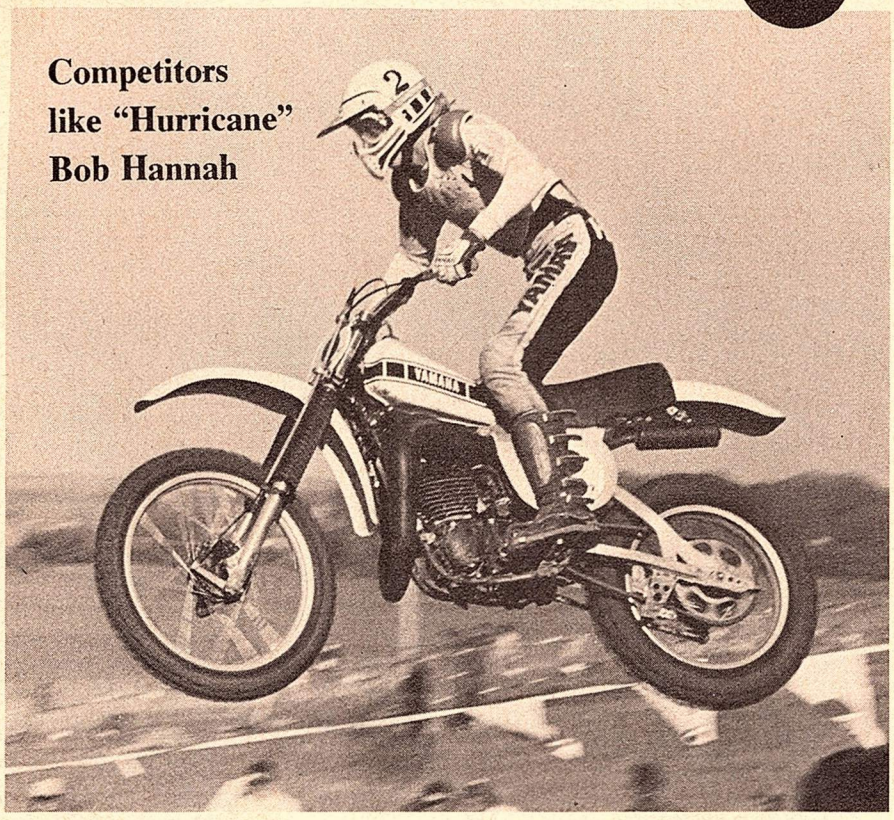

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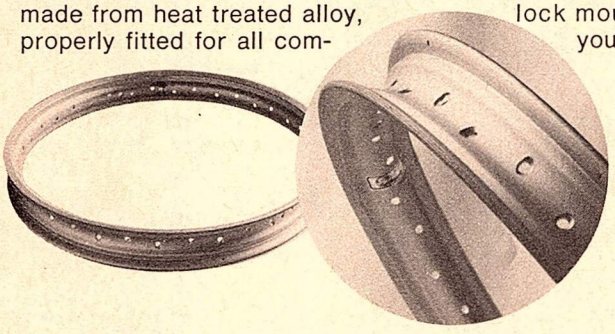

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out and only experienced hands are allowed to use the communicators. There's an added bonus here in that the track announcer is in on the net and can report to the spectators what's going on around the track. Not bad for a regional organization.

And regional it is, AAMRR has no imperialist schemes. They intend to provide the Northeastern area with a good, well run racing program and be content. They do intend to leave no stone unturned though and have people assigned to handle everything right down to sending results to the concerned press along with a followup tickler reminding said press of who is sponsoring who and expressing appreciation for mentioning sponsor's names. The breadth of the responsibilities AAMRR has assumed is remarkable. You can't pay people to do this sort of thing, this is the dividend of personal commitment.

Keeping in character Steve suggests I purchase a copy of the handbook, no shameless coddling of the press here.

Interview done I peer through the drizzle for interesting or famous faces to fill out the agenda. They're temporarily absent from the neighborhood. An aging 250 Ducati single goes blat-blat-blat reminding me of the good old days. Since the entries aren't too numerous there won't be any heat races this afternoon and not too many people are out for late practice. It's getting near dinner time anyway.

Looking around I spot a Motor Home that appears warm and comfortable and, putting on my best Contributing Editor expression, I knocks on the door.

"Hi—I'm from *Modern Cycle* Magazine and . . ."

"Come in, come in."

(I'm terrible sometimes.)

Turns out this is Frank Smith's place. He and Greg Zizza are racers. Frank has a well turned out 3 cylinder 400 Kawasaki, while Gregg races a 500 Suzuki twin that he hasn't finished putting back together yet. Despite that Frank, Greg and their respective wives are making a weekend of it here at Thompson.

Greg teamed up with Liz Wemmett last year and it is from him that I learn Liz has had a road accident with her freshly rebuilt BMW. Liz was injured, but not seriously. However the R90s probably won't be seeing any action this year.

We talk about racing through a dinner of chili, salad and ancilliary items. Both these fellows race for their recreation. They enjoy putting their bikes together as well as hammering around the track. They aren't in it to win, though that'd be nice, just to have a good time. Frank's Motor Home is

(Continued on page 74)

MICHIGAN MOTOKLUTZ, INC.

FICTION

Two enterprising young dirt bikers from Michigan have formed a very successful service-oriented business. It is an attempt to capitalize upon the fact that the shorter riding season of the northern climate forces the bikers there to cram twice as much craziness into half the riding time.

Called Michigan Motoklutz, Inc., the shop is primarily dedicated to helping the novice motorcycle enthusiasts whose total disregard for sanity has led them into a diversified array of unusual problems. The novel concept incorporates an enormous staff of mechanics, doctors, lawyers, dentists, psychiatrists, sex therapists, and even one full-time undertaker.

Sex therapy for bikers? "You'd be surprised at the amount of guys that come in here with performance problems caused by sudden stops and large gas tanks," explains the resident therapist. "We've just started treating a fellow today who got his favorite organ caught between the seat and the tank when he was thrown over the handlebars, stretching it out to almost a full three feet long. Needless to say, this made his wife ecstatic; but unfortunately, it takes about seven pints of blood for him to achieve an erection, which immediately causes him to faint dead away. Out of sheer frustration, his wife has become a valium addict and was beginning to resort to desperate solutions like putting a tourniquet around his neck."

The dentists have two chairs, no waiting. They specialize in extractions. Yesterday they extracted the rear wheel of a 360 Husky from the mouth of a novice rider who got a little over-eager as the pack scrambled for position coming off the starting line. "It was pretty messy work," recalls the dental staff. "This guy was screaming horribly and tearing out his hair, afraid that we might accidentally break a tooth on the sprocket or bend a spoke. Finally we had to sedate the Husky's owner so we could work on the patient uninterrupted."

The cycle shrinks keep their couches filled most of the time, but the chief psychiatrist explains that winter is their big season. When the heavy snows start accumulating, the winds of frustration start piling up tall drifts of anxiety as the dirt biker can no longer see any dirt. For a while, he is content riding around in circles in the garage until the exhaust fumes overcome him. Then, as the tension builds and his sickness gains momentum, he is likely to become afflicted with the Kamikaze Snow-Scrambler Syndrome, and attempt to hill-climb the nearest snow-covered freeway embankment. When he gets out of the hospital, if there is any winter left, he may progress to the final and usually irreversible stage of this seasonal sickness and commit suicide by swallowing an overdose of piston rings.

As might be expected, the legal staff is swamped with actions for and against the novice bikers. There are many trespassing suits, and frequent divorce cases with Hondas or Yamahas named as correspondent. "Probably our most interesting case," reflects the head coun-

(Continued on page 81)

BY NED OWENS

When we tested the DT-250D in recent issues of Dirt Rider magazine, we had a chance to ride it for awhile and speculate on whether or not it would be possible to convert the bike to a slightly more acceptable enduro—more off-road than on.

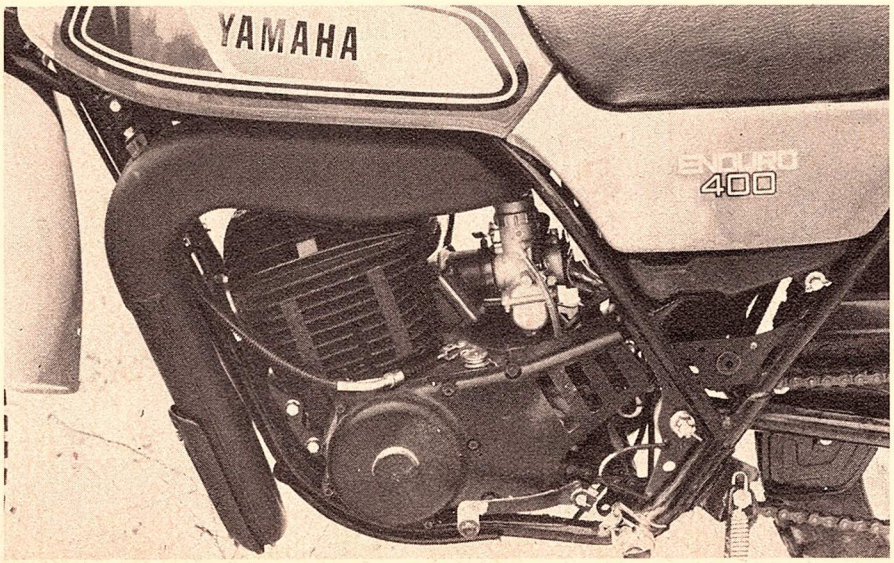
We decided, at that time, that the money necessary to convert it would make the DT more expensive than the IT models. So we dropped the discussion.

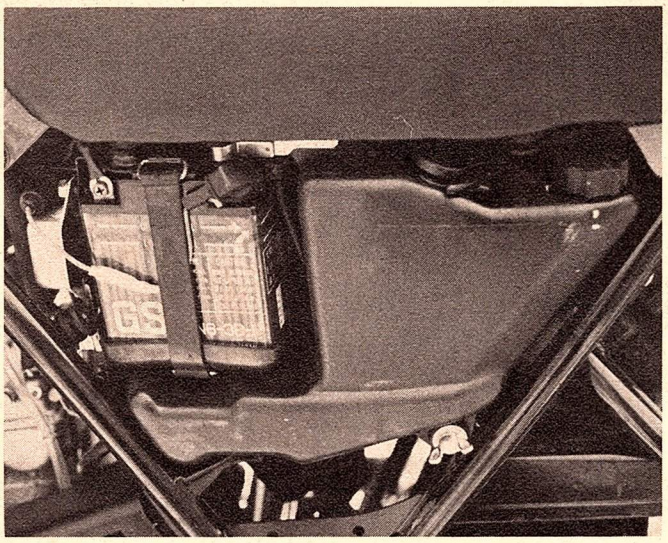
That is until we received the DT-400D. Not that the 400 would make more of an enduro than the 250 size, but that it got us to thinking about those riders who would still want to ride the bike on the street. In many states the IT can't be *legally* licensed, so an enduroized DT might be the ticket for the serious dual purpose rider.

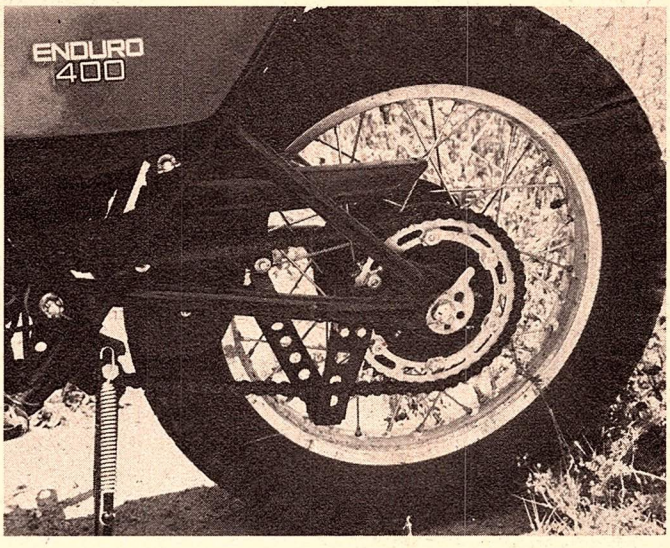
To support the first part of the conversion, we decided, at the very last moment, to enter the DT in a desert enduro as it sits — stock sans mirriors. Since it was my idea in the first place, I ended up riding the DT. I had many reservations about the suspension, tires, power, etc. I could imagine myself paddling through sand washes while the trials type tire spun ineffectually in the soft earth.

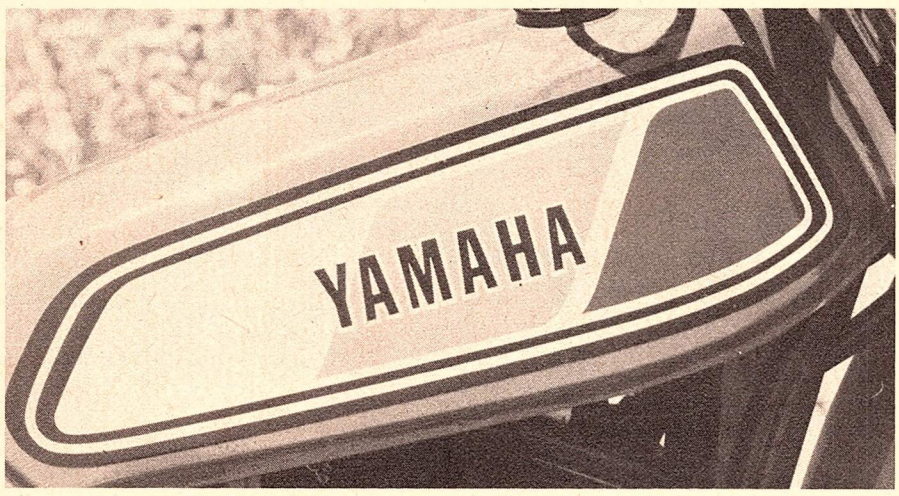
MONO DUALISM

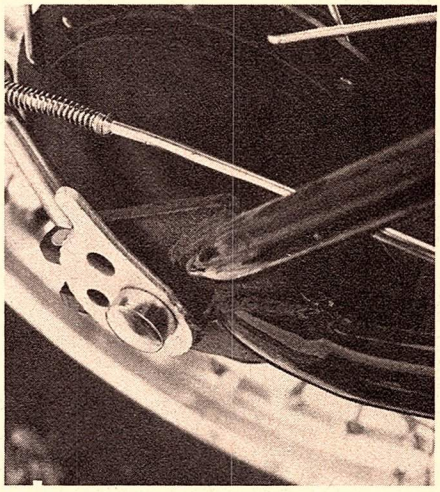
Yamaha DT-400D







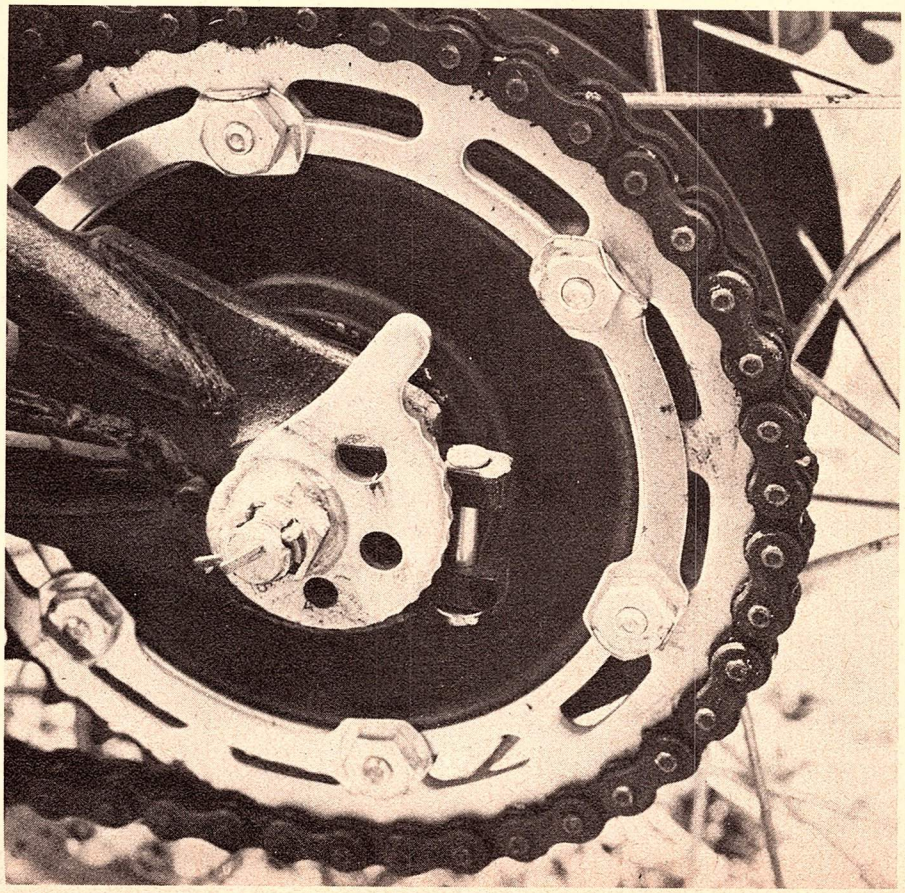




What we determined by the end of the afternoon, was that it was actually one of the most fun rides I had had in a long time. The suspension was a little on the soft side for fast whoops, and the front would occasionally wash out if close proximity to the bars wasn't adhered to by the rider. These wash outs caused a couple of low sides that didn't damage the bike in any way—including the flexible turn signals. (What we go through to test these thing!)

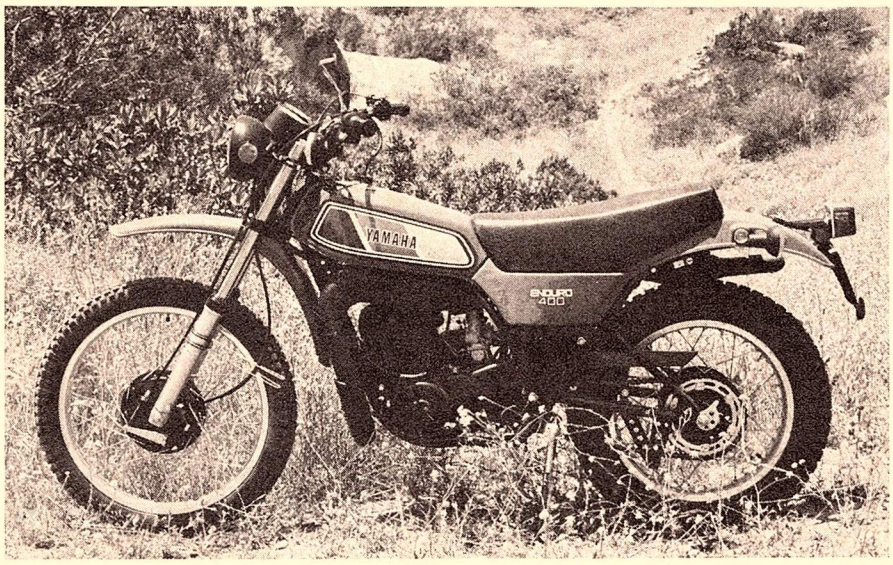
The pure beauty of the 250 was the absolutely effortless manner in which it tackled hills. It would really get down and plonk up narrow gorges lined with stalled riders. It passed dozens of riders fighting a late-winter snow field. With the trials tires! It would go up hills whether the rider stood up, sat down or drug his feet.

Gone was the clutching, paddling, spinning and finessing that is necessary on a peaky, high revving enduro bike. I actually put my head down on the tank, sat down and went under the handlebars of stalled riders who leaned over to let me pass. Every time I came out of a nasty section, I couldn't help but grin. I had passed dozens of bikes, most costing twice as much, and all specifically designed for this kind of riding.



With this good outlook I awaited the 400. It shares many of the same components as the 250, including the monoshock suspension, forks, brakes, hubs and frame. The 400 is basically the same with just the increase in displacement and weight.

It has the nifty ISDT style snail-adjustered, quick-change rear wheel assembly, the side mounted tool box and flip out oil tank. The seat is bolted down and is lighter since it doesn't have to double as a trunk lid. It is styled after the competition bikes and is contoured to fit the tank.



To enjoy the bike in the stock category, a couple of simple guidelines must be followed. One is to run about 12 psi front and 10 rear, unless there are severe rocks. The suggested pressures in the manual are for road riding and just don't cut it in the dirt.

Another change is to fine tune the carb. Most of the dual purpose bikes come jetted a little fat when they are new. The reasons are to help prevent overheating (and over-revving) when new. After the break-in period, savvy dealers will change the jetting. We ended up going down one size smaller on the main and pilot jets. We left the needele in the middle position. This will help the stocker really get down and work at low RPM and gets rid of the chugging at low speeds, and the surges throughout the rest of the power band.

SPECIFICATIONS
YAMAHA DT-400D

ENGINE

Type	2-stroke single
Displacement	397cc
Bore and stroke	85 x 70mm
Compression ratio	6.4:1
Max. torque	27.5 ft.-lbs. at 5,000 rpm
Ignition	C.D.I.
Starting	Kick
Lubrication	Autolube
Transmission	5-speed

CHASSIS

Overall length	86.0 in.
Overall width	34.3 in.
Overall height	45.9 in.
Wheelbase	55.7 in.
Ground clearance	10.0 in.
Dry weight	268.4 lbs.
Fuel tank capacity	2.4 gals.
Oil tank capacity	1.2 qts.
Suspension:	
Front	Telescopic forks
Rear	Monocross suspension
Brakes:	
Front	Drum
Rear	Drum
Tires:	
Front	3.00 x 21
Rear	4.00 x 18
SUGGESTED RETAIL	$1199

These little changes make the DT-400D quite liveable. If you want a bike that won't fight you every time you ride it, and one that you can ride to school too, then the DT-400D is a neat big-bore scoot.

If, eventually you decided to get a little more serious, a fork kit, knobbies, change of mono spring and a few small items would make it more competitive.

But why bother? it's a gas like it is. Trials tires and all. ●

A sensual pair of lenses

Climax Motorcycling Goggles

BY WILLI SCHEFFER

PHOTOS BY WILLI SCHEFFER

Getting a piece of protection for the eyes

Do you remember wearing a pair of goggles before changing over to face shield or a full coverage helmet?

Which one of your senses comes to mind when you think of riding through the countryside or traveling on city streets? If you answered your sense of smell, you guessed right.

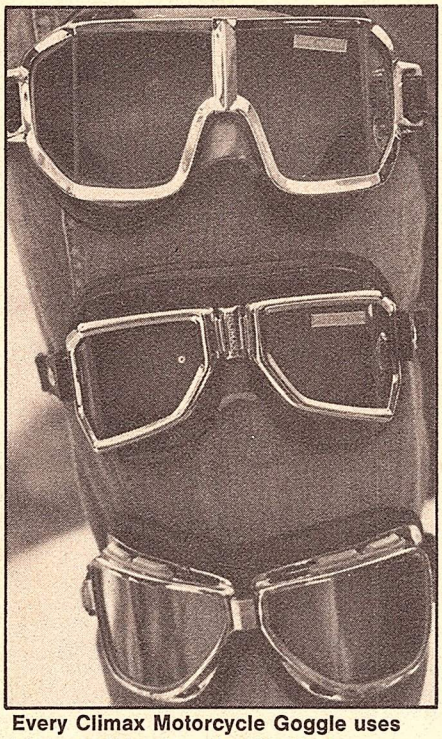
The smell of chocolate in the town of Hershey, Pennsylvania can set your sweet tooth on fire. Spring brings the sweet fragrance of orange blossoms in Southern California. And don't forget the scent the cattle leave behind at the outskirts of Chicago, Illinois.

You can miss a great deal when wearing a full coverage helmet.

Holding a pair of Climax Motorcycling Goggles makes you feel rich. Rich, because you are holding one of the best made goggles money can buy. And besides, they just look like the kind of thing you'd have to be rich to have. Climax goggles are synonymous with quality.

Each pair of Climax goggles uses triplex safety glass. If taken care of properly, the glass goggles could last for years, while the plastic style face shields will last only a few months no matter how cautious you are to preserve the lens.

Top quality materials are used for construction of the goggles. Leather, not bare foam rubber, is used to cushion the face. There is enough nylon scrap material to comfortably fit around your head snuggly without falling down to your neck. Or, you can use the strap on the outside of the helmet. Either way you strap a pair of Climax goggles around your cranium, be confident that they will stay in place.

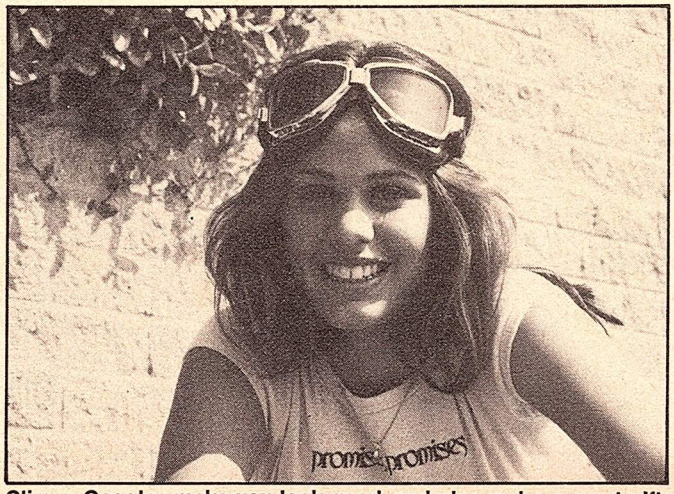


Every Climax Motorcycle Goggle uses triplex safety glass, leather face cushions, and is mounted with rustless fittings. From top to bottom: the CL-521 is specially made to wear over prescription glasses. The middle CL-513-S is the competition version, and the bottom pair of CL-510 are the wide visual angle Grand Luxe competition type goggles are the most popular of the line.

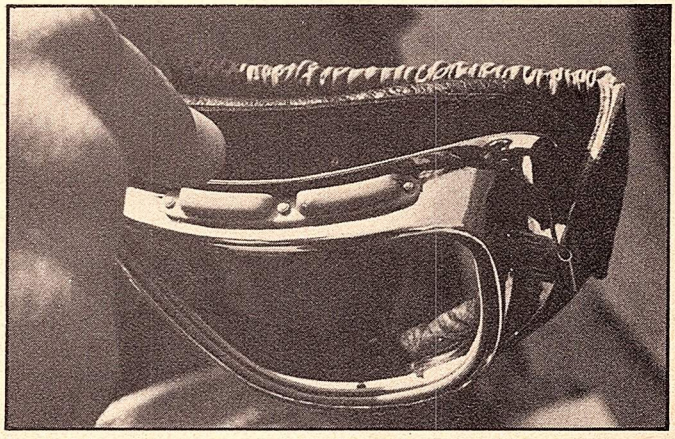
Finally, a pair of Climax goggles are mounted in rustless fittings. When the Cycle season is over where you live, just retrieve the goggles out of your helmet and head for the ski slopes.

My first time out on the road wearing a pair of CL510s brought on a small fog inside the goggles. In less than five hundred feet, the fog inside the goggles cleared up. The fog in the goggles will only happen when you're sitting at a very long traffic light, or your bike does not start as soon as you thought it would. The small vents on top of every Climax goggle help to circulate the air inside the goggles. No matter what speed is traveled, the turbulence inside the goggles is not even worth mentioning.

What is worth mentioning though, is that Moto Fast can get you an excellent pair of Climax Motorcycling Goggles if you cannot find any in your neck of the woods. That's Moto Fast, 1060 Florence Way, Campbell, Georgia (408) 374-9670. ■



Climax Goggles make you look good and also make a great gift.



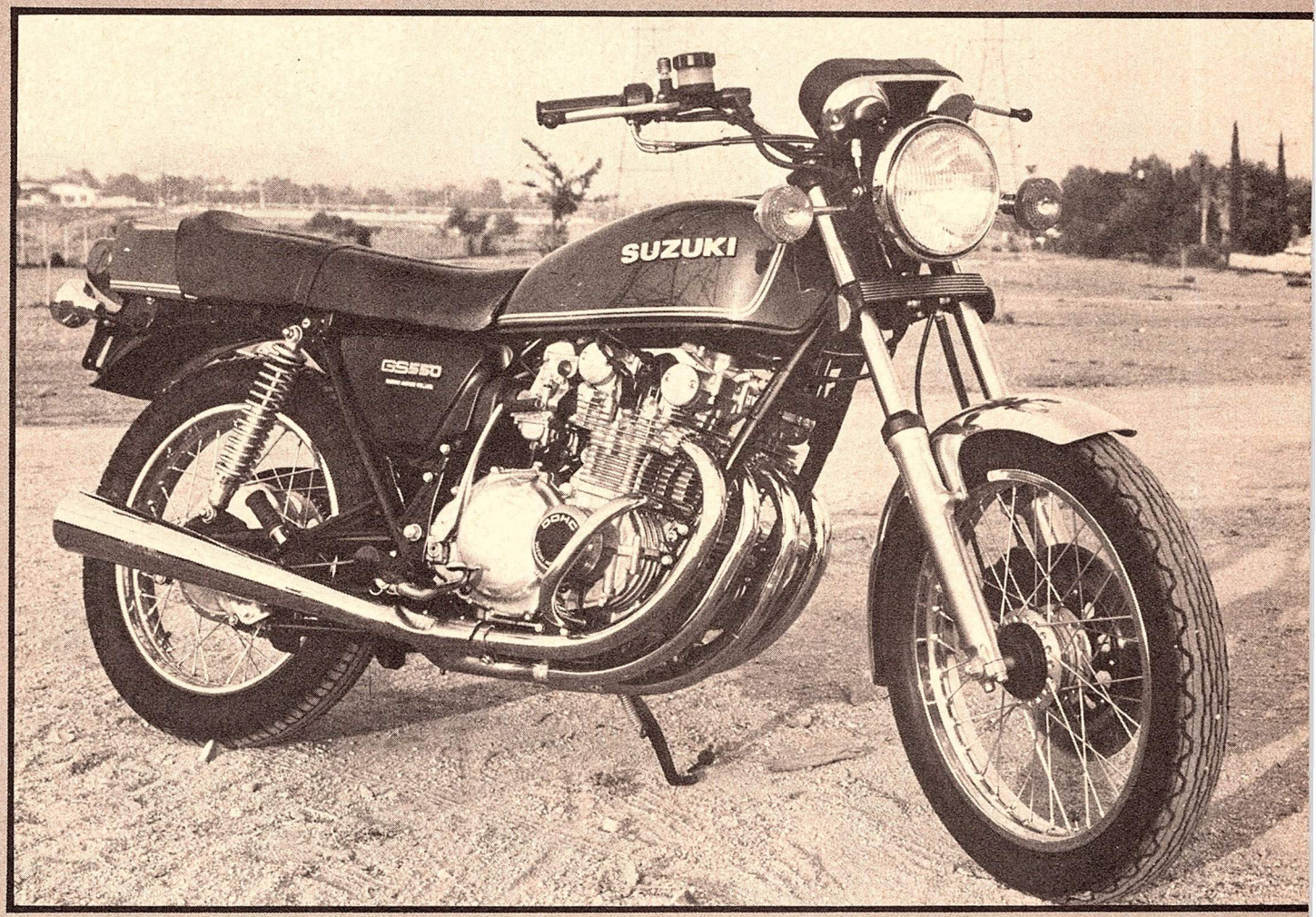
Each Climax goggle has ventilation holes to quickly clear a fogging lens. High speed turbulence through the vents do not affect your eyes or vision.

ROAD TEST

STORY BY JEFF PECK

MARK OF EXCELLENCE: SUZUKI GS550

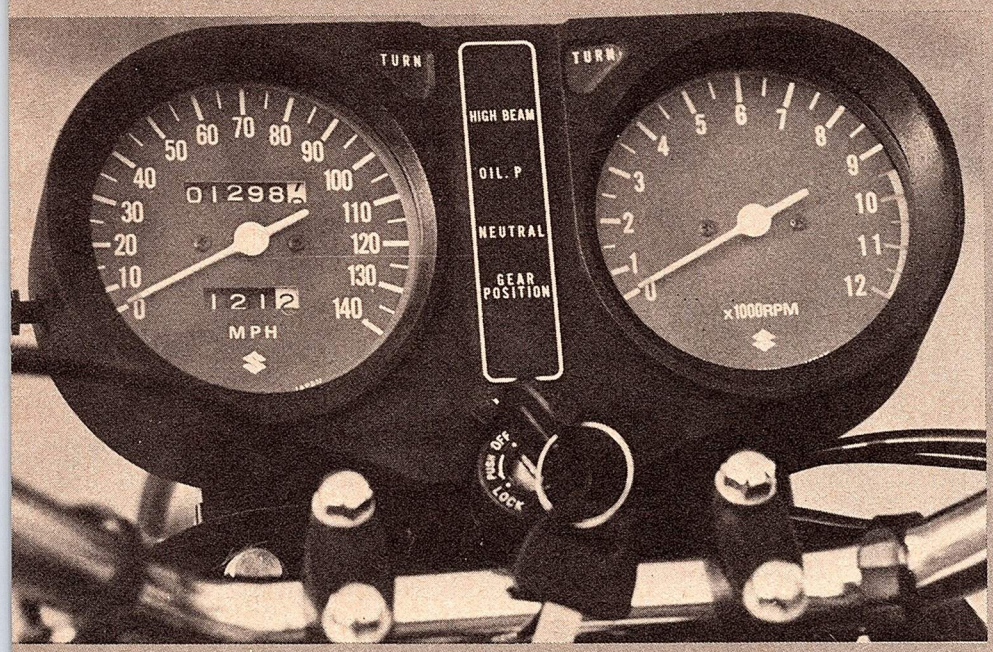
PHOTOS BY LARRY GAYNOR

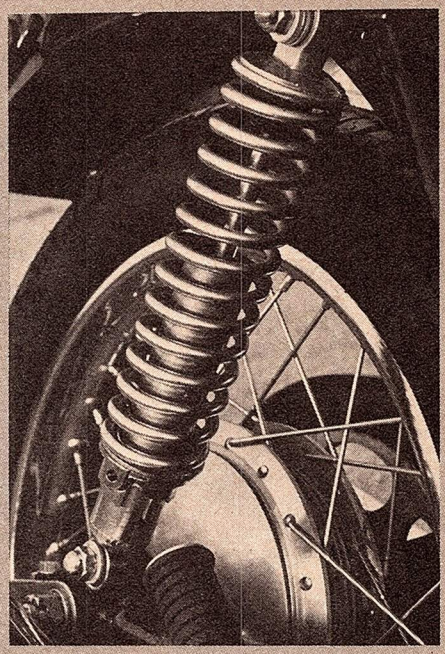


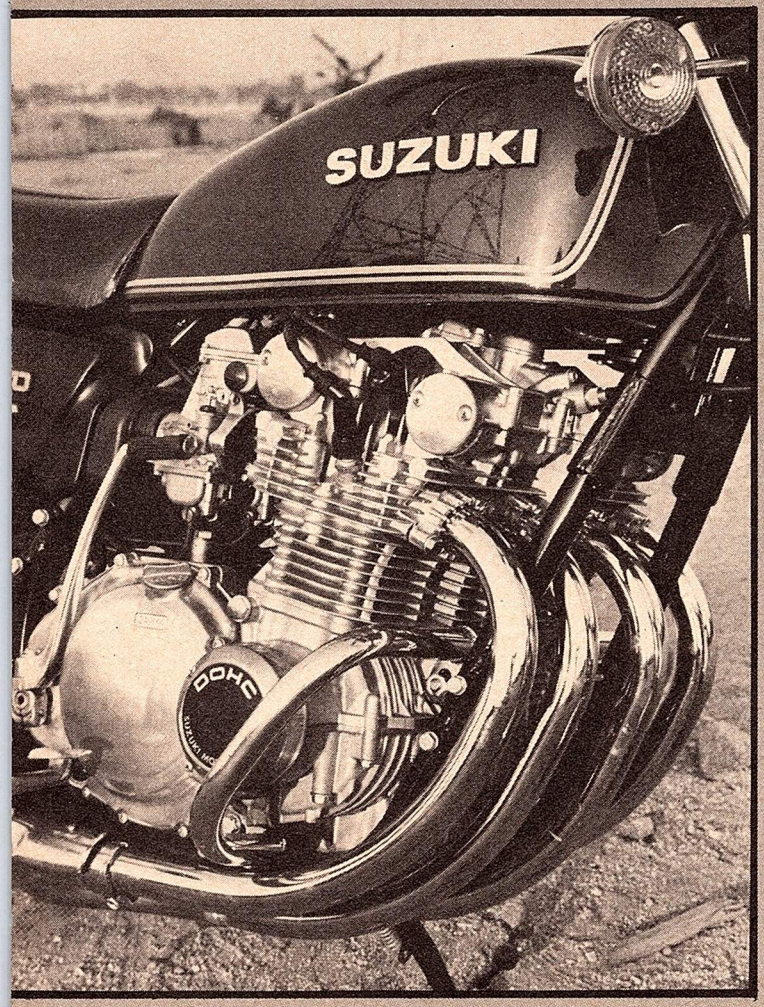
In the space of one short year Suzuki has come from a position of being a company many people were wondering about, because of their product line consisting mostly of two strokes, to being a powerhouse in the four stroke market. This sudden change in direction is the result of their introduction of the GS series of motorcycles. The 750 has been touted by just about everybody as the best multi-cylinder sports/touring bike available. At the other end of the spectrum is the GS400 which seems to have put performance into the commuter market.

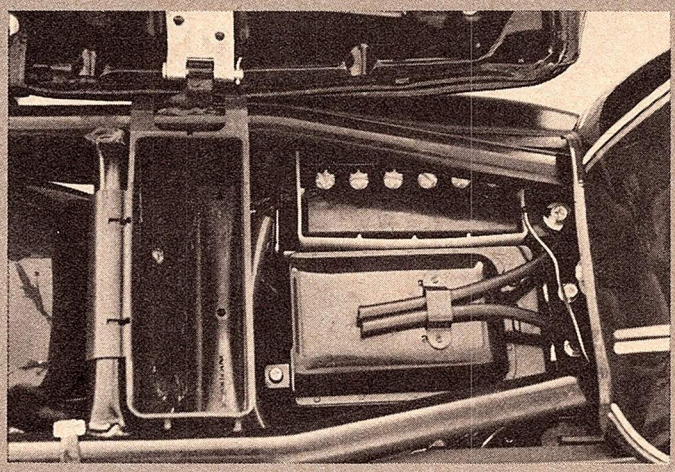
All Suzuki needed to fill out this line of winners was a 550 and here it is. Entering into a market place which has been almost the exclusive domain of Honda, Suzuki has hit it with everything they have. Starting with a double overhead cam motor and dropping it into one of the best handling packages around.

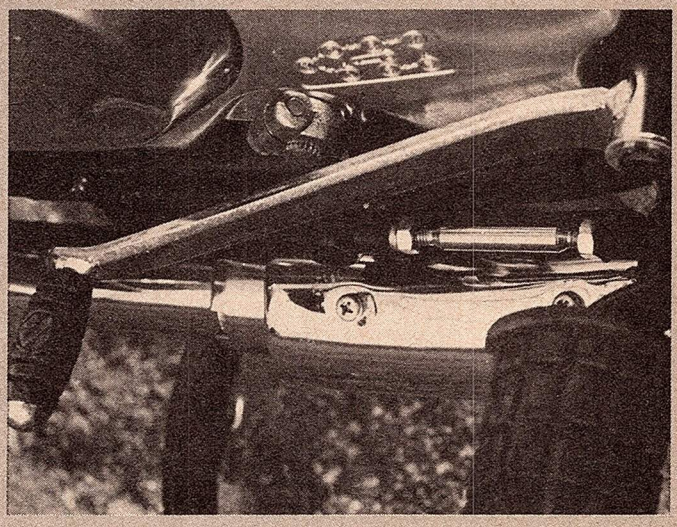
As far as performance from the engine is concerned, many people will feel they only had the right to expect this











type of acceleration from a bike much larger. We don't want to go to the extent of saying it performs like a 750, but in a recent trip to the drag strip the 550's times were right down there with another manufacturer's 750. Not as fast, but within a few 10ths.

If you take a step back from the 550 and just look at the motor you'll notice that it draws heavily from its 750cc brother. All of the designing is virtually the same except shrunk to fit.

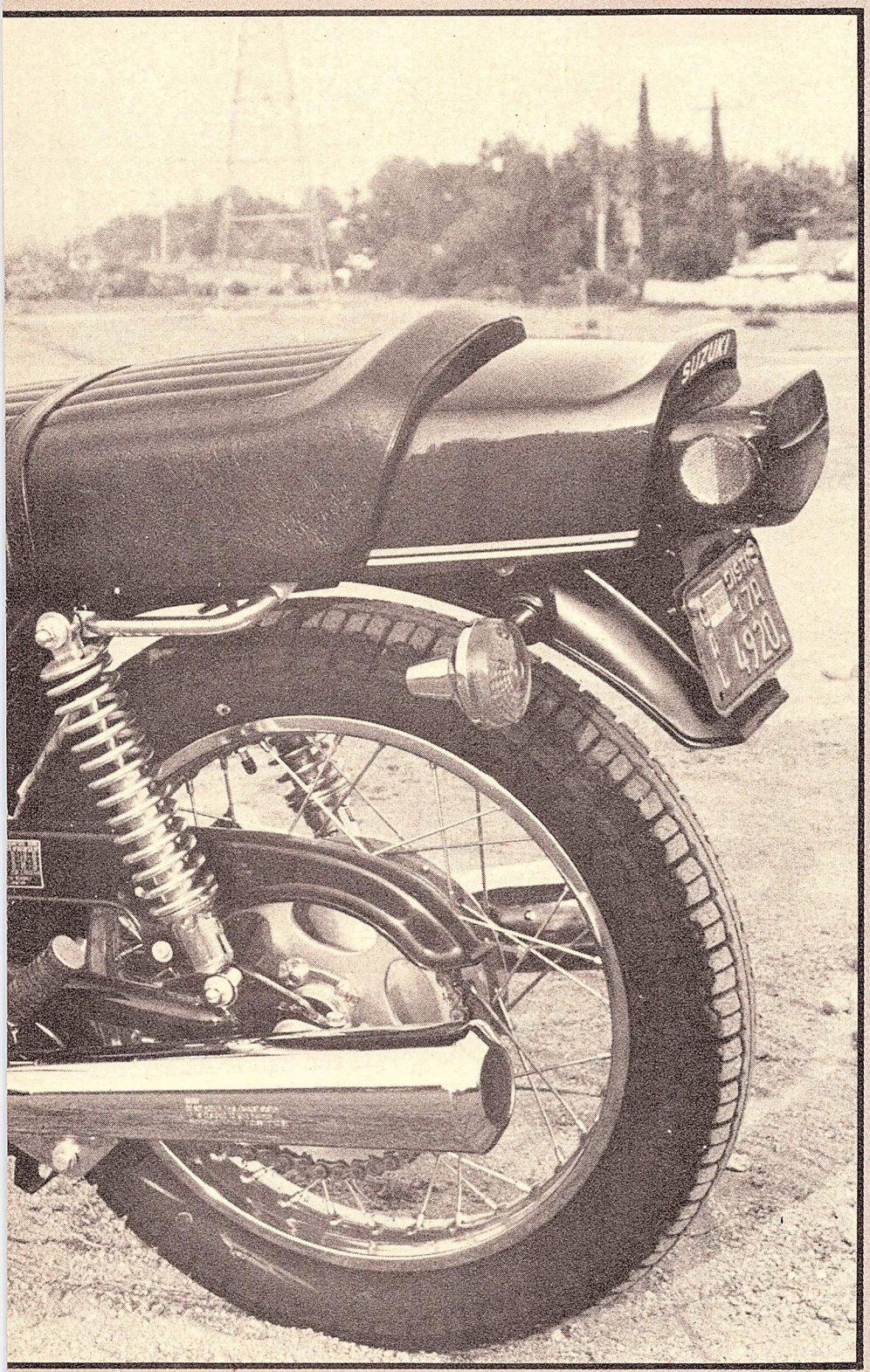
This similarity carries over to the inside of the motor where you'll find the same press together crankshaft and the one piece rods. Also the double overhead cams use the same type of bucket tappets with the shims on top. Babbit type cam bearings are used in the head and the cam chain has the same type of chain adjuster as the 750. This adjuster takes up slack in the chain automatically and helps avoid over adjustment.

A twist Suzuki threw in on the 550 is the use of a slick shifting 6 speed trans. The motor doesn't need it, but

it is nonetheless impressive. All of the ratios are very close together and allow you to shift up rapidly without causing problems bogging down the motor.

Along with the six speed box is a very nice clutch that doesn't try to arm wrestle you for a shift. Lever action is very smooth and light. During heavy use we noticed none of the tendency to fade some manufacturers' clutches have. This was refreshing in that you could run the bike hard and not have to worry about losing the clutch somewhere along the line.

Another piece the 550 shares with the GS750 is the "O" ring style endless chain. While we didn't experience any problems with this chain either on the 550 or the 750, we feel that there is an alternative an owner might want to use when the stock chain stretches out. We've had excellent results with the Tsubaki chain and feel as a replacement you can't go wrong using it. The Tsu-



baki isn't an endless chain, which will save some problems. It is very strong and resists stretching better than anything else we've used so far and it's much cheaper than the stock replacement chain.

Handling is an area many of the Japanese motorcycle builders seem to have a hard time sorting out. In this particular case Suzuki seems to have been doing their homework. Suspension on the 550 is very well suited to the size of the bike. The front seems almost too soft at first as it easily moves down the road absorbing bumps large and small. In the rear damping action is just as good. You never get the feeling that the shocks just went flat and you're riding with a couple of steel rods for suspension.

Coupled with this very good suspension is a frame that resists any sort of flexing no matter how hard you press it in a turn. Most of this strength can be attributed to the heavy gusseting used liberally around the frame and a swingarm which should be mounted on a much larger machine. Thankfully it's on this one, something you'll appreciate on a fast ride down a twisty road.

Along with being very strong most of the 550's weight is carried relatively low in the frame. This allows the bike to be easy to handle and maneuver, either at low speeds through heavy traffic or while making a banzi run.

It's obvious Suzuki has the performance angle of motorcycling pretty well dialed in and it's also doing a fairly good job of chasing down the rider comfort part. About the only point we disagree with them on is the type of handlebars they use. These are the same bars that were on the 750 and we didn't like them on that bike and we still feel bars which make you sit up as straight into the wind, as these do, are wrong.

Other than the bars, the rider has it pretty good on the Suzuki. All of the controls are easy to reach and as we've already said the clutch is very easy to operate. This ease of operation also extends to the brakes. Both front and rear binders have fairly good feel and don't have a tendency to be touchy. Considering the weight of the bike stopping is very easy.

The tach and speedo are easy to read night and day. This is because the faces are very large for daytime use and at night they are lit by orange tinted lights. This is a very nice feature because the numerals on the dial faces stand out very well, but the light does not glare in your face. One other thing has been added to make the Suzuki more convenient, this is the addition of the front end lock in the ignition switch. Not only is it convenient, but it makes safety much easier. There's less chance of returning to your bike in a parking lot and find it gone just because you didn't want to take the time to lock the front end.

Overall we have to give the Suzuki an A-plus. It's a very pleaesant motorcycle to take on short hops around town and will still be more than adequate for long distance touring. It has more than enough power to keep ahead of the flow of traffic without working the motor to death. Fuel capacity is high enough to insure you a comfortable range and the ability to go just as far as many larger bikes. This is nice when riding with a group on a long trip, since making many gas stops because one person has a very small tank is a rather large pain.

Considered piece by piece the Suzuki GS550 is a very impressive motorcycle. As an entire package it is probably more than many people would expect for an asking price of $1745. The GS550 is undoubtedly the new mark of excellence to aim for if a manufacturer is entering the middleweight market place. It is THE bike of the class. ●

Have you ever taken the time to wonder how a clutch is made? Most people just rip open the package and install the thing because they're in a hurry to get somewhere and they probably don't care what they're installing in their bike.

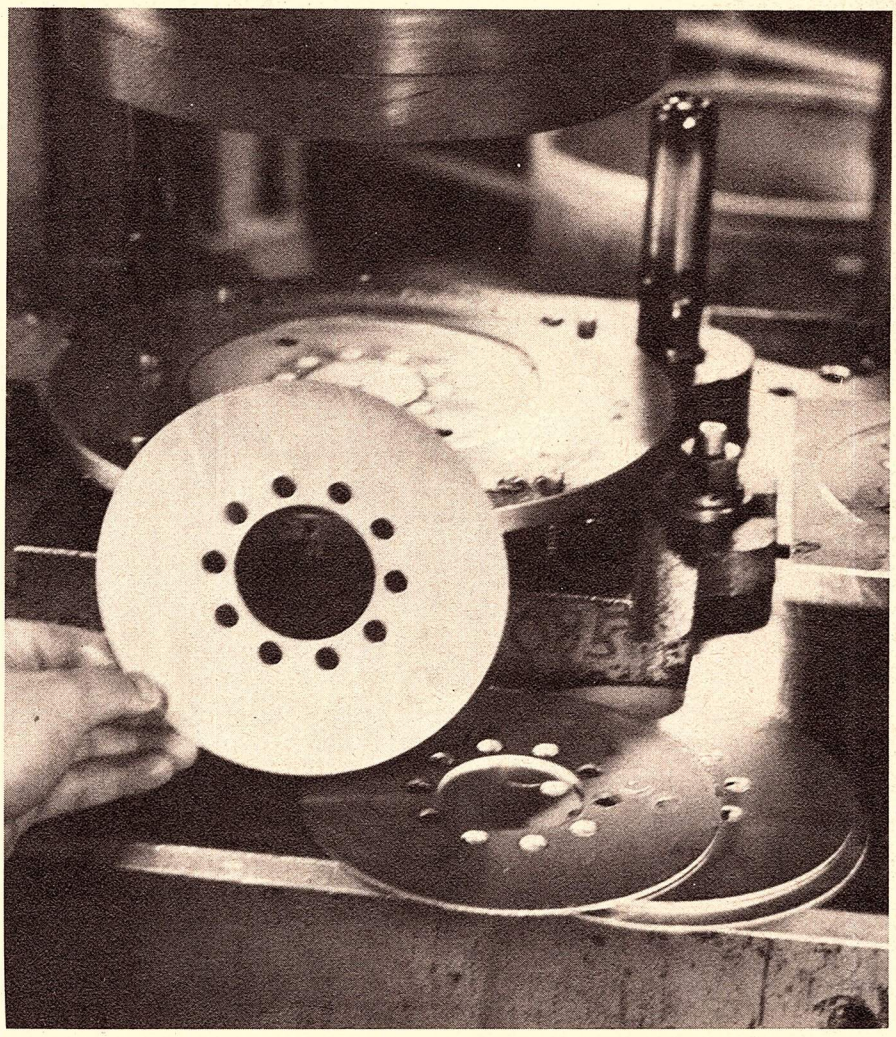
We were doing a little wondering on this subject and so we made a call on the best known people in the clutch business, Barnett Tool and Engineering. Before we went down to the Barnett factory we didn't know a thing about how clutches were made. For all we knew it could have been two guys sitting in a garage with a hacksaw and a bottle of white glue.

How they're made

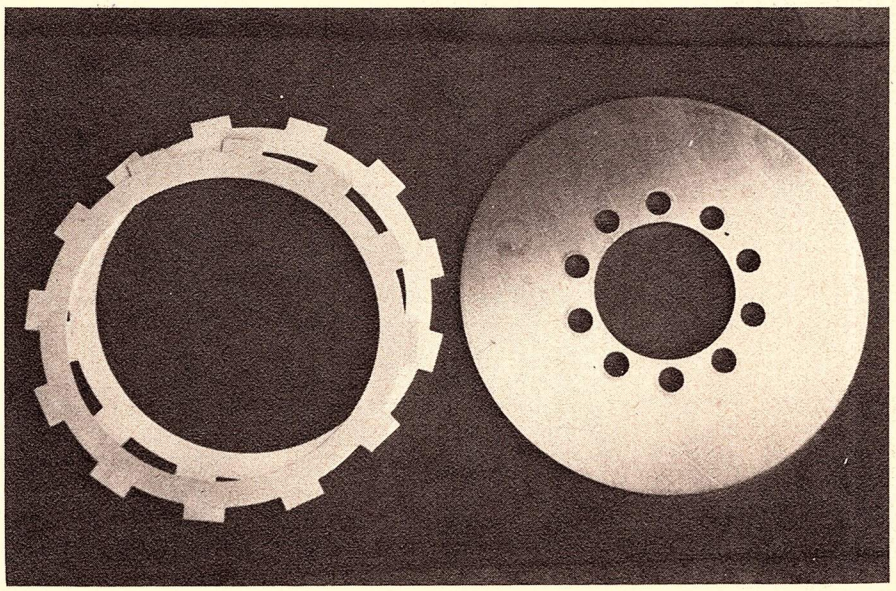
INSIDE THE BARNETT CLUTCH

"Pass the glue, will ya?"

STORY AND PHOTOS BY JEFF PECK



Before you can go anywhere in building a clutch you have to get the basic plate. This huge press slams down and spits out this basic Harley clutch.

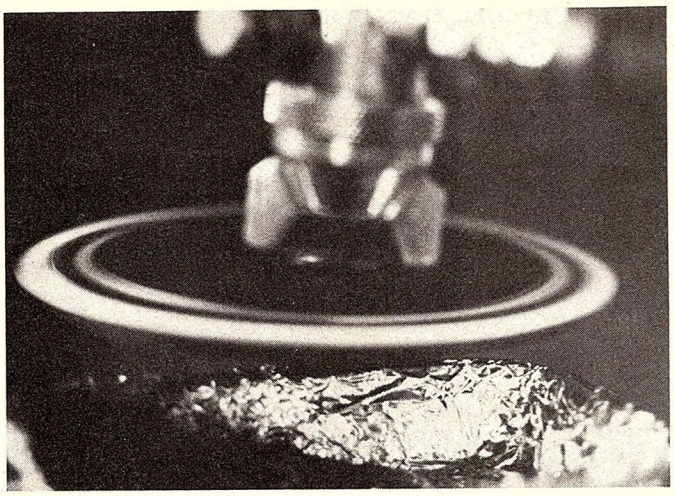


After the plate is punched out it is bathed in acid to clean all of the grease and dirt off of the surface. This is to insure good adhesion. You can see there is a little difference in the color between a freshly punched out clutch and one that has been washed.

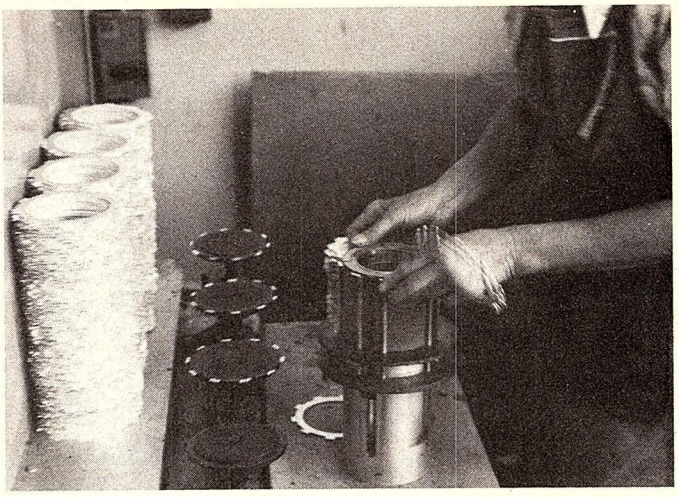
Fortunately, this was not the case. Barnett Tool and Engineering is located in one of the more popular industrial sections of Los Angeles, right near Farmer John and a few other meat packing plants, the odor in the air was indescribable.

Half of the BT&E facilities is strictly for the production of their complete clutch line. We had a chance to view the process from start to finish and were really impressed.

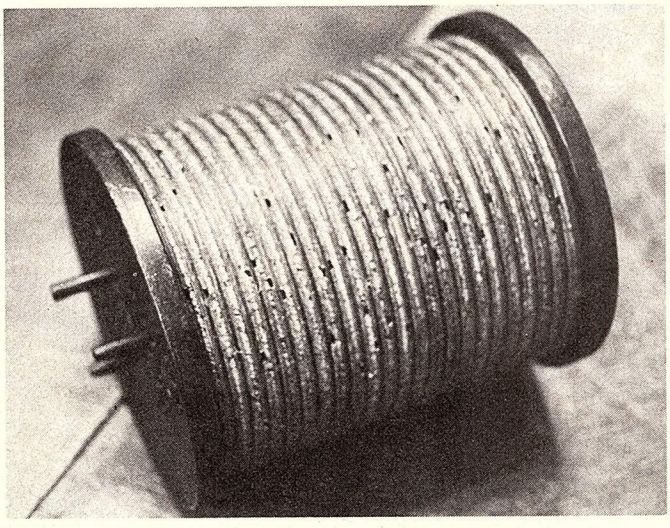
The first point in the production of a clutch plate is the stamping out of the basic plate from a sheet of metal.



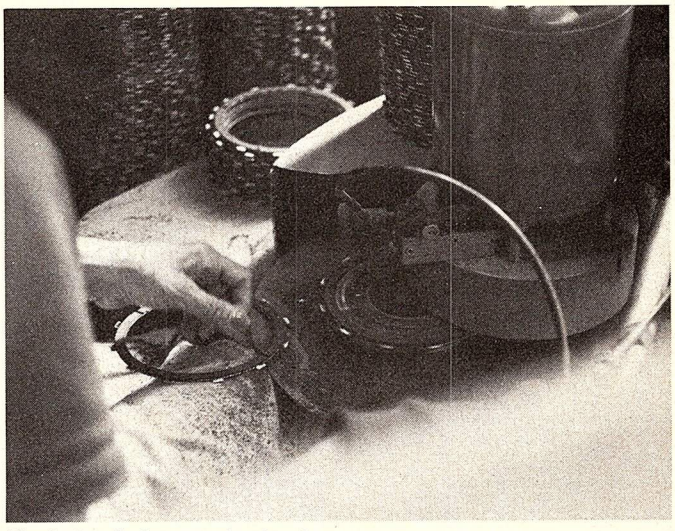
Next stop is the adhesive. For those of you who were expecting to see someone spreading it on with a brush, surprise! The plate is spun at high speed and the glue is sprayed on.



Right after the adhesive is sprayed on the clutch material is attached to the surface.



Once both sides of the plate have been sprayed and had the clutch material attached to them, the clutch plates are bound together and baked in an oven. This is done to cure the adhesive and to insure a good bond.



Final step before packaging is to check for proper thickness. The tolerances are very tight, the Barnett people want to make sure that all of their clutches are the very best.

We saw one of these big punch presses in action and it's amazing watching that huge machine spit out a tiny little metal disc.

Next stop along the way is a short stop in an acid bath. This step cleans all of the grease, oil and dirt off of the metal's surface to insure good adhesion when the clutch material is attached to the surface.

Once the metal has been cleaned thoroughly the adhesive is applied to the surface and the clutch material is pressed on. This step requires the clutch plate go through twice because only one side of the plate can be sprayed with adhesive at a time.

Most Barnett clutches use a material that looks a lot like cork. This material is delivered in long strips and then separated into the proper size pieces for the clutches being manufactured at that time. This may sound a little time consuming, but the BT&E people have worked a long time getting everything down to where it takes the shortest amount of time to complete each process.

Another material Barnett uses on their clutches is an asbestos covering. This is used primarily for Harley clutches and then only for a drag racing dry clutch.

After the clutch material is attached to the plates surface the plates are bound together in large bundles and baked in large ovens. This is done to cure the adhesive and insure that the clutch material doesn't separate from the plate.

The final step before packaging and shipping is surface matching to make sure that all clutch plates fit into the very tight tolerances Barnett Tool and Engineering has set-up. A certain amount of the material can be removed, but if too much has to come off the plate is rejected.

We were amazed at all the steps involved with the making of a clutch. We sort of expected the two guys sitting in the garage with the bottle of glue.

The clutch is one of the most important parts of your motorcycle. You can have all the horsepower that can possibly be dragged out of an engine, but if the clutch isn't hooking up it's not going to do you a bit of good.

For more information on Barnett clutches talk to your nearest motorcycle dealer he'll be able to get one for you. ■

6

BIG ORANGE

BY NED OWENS, PHOTOS BY OWENS AND PECK

HARLEY'S 250 MX

Almost a full year ago, on the pages of *Modern Cycle*, we tested Rex Staten's factory Harley 341. In that test we came to a couple of conclusions.

One was that the bike was a superb handler. The other was that Harley Davidson is a company that is not in a hurry to do things. They won't produce a bike until they are satisfied with it.

A year later, HD finally released their production motocrossers. The first to go to the dealers will be the 250.

At a special showing of the new motocrosser, we got a chance to record some riding impressions of the new orange bomber. The setting for the test was probably one of the most scenic and interesting tracks that we have ever ridden on. Winding in and out of the meadows and hills at the edge of the Sequoia National Forest, provided a good one-bike test.

The track was loamy in the morning and held a lot of its moisture all day. Intermittent rain kept things damp. It was really an optimum track surface, one that we were not accustomed to. Our test tracks, many times, are hard packed and dry, so a comparison to another 250 is difficult under these circumstances. The change in track and surface make big differences.

Our first impressions of the bike, though, are good ones. It is a stunning handler; on a level with Maico. Front end bite, quickness and precise steering are all parts of the Harley handling.

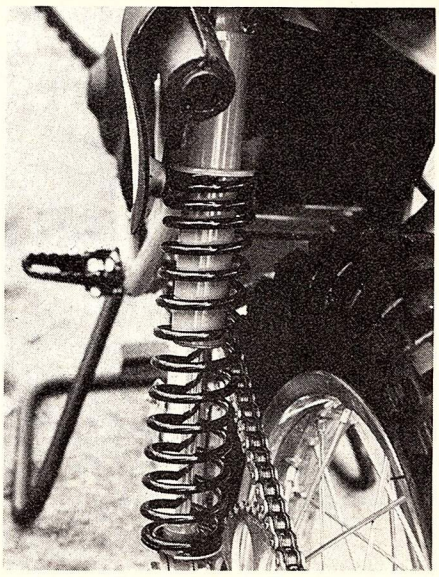
This is achieved through good frame geometry and the addition of some good components. Kayaba forks, very similar to the RM Suzuki units, and Kayaba gas shocks with reservoirs are just part of the package.

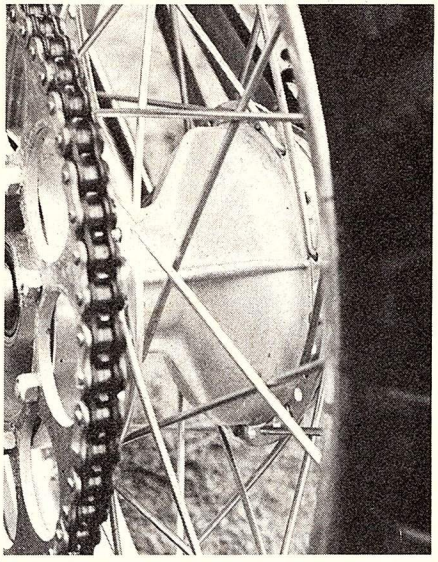
Of the suspenders, the forks get the nod as being the better of the two. These leading axle units have an excellent feel that will compare to anything but the Simons/Fox air/spring set up. The forks had a slight tendency to pump up after 30 minutes. If the dampers are similar to the RM units (which they may be) this mod would make the forks impeccable.

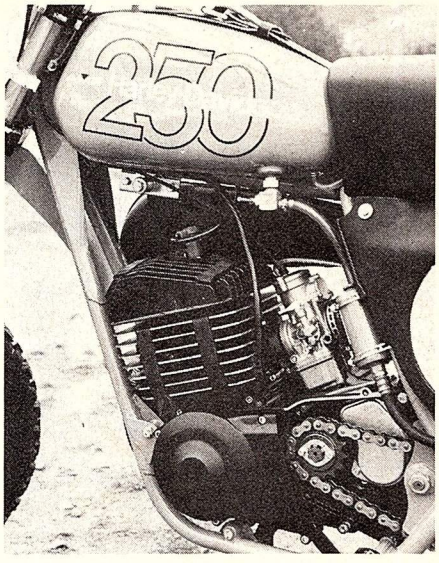
Tubes, forged clamps and stem are all strong items. We never noticed any flex, something that is more and more prevalent with long travel forks.

The shocks, though, seemed to need a little help. Compared to some of the good current shocks, these older style Kayabas are a bit harsh on stutter and medium-size bumps. They work fine on jumps or big bumps that use a full stroke, but become insensitive on the choppy stuff. There is no preload adjustment either.

Frame and swingarm are heavy duty and appear to be super strong. The frame has massive gusseting around the steering head and other high stress points. Distance from the swingarm pivot point to the countershaft sprocket is over five inches. This could cause chain problems, but that is just speculation.







One thing that may prevent that is the tensioner and the strong swingarm. Axle/tab shock bracket combination appears to be extremely strong. Chances of any kind of flex at the swingarm are remote.

Rims and hubs are also quality units. Our test bike was equipped with green tag ridgeless aluminum Akronts laced to Lielu hubs. Several European manufacturers use these hubs. They are strong, light and afford excellent brakes.

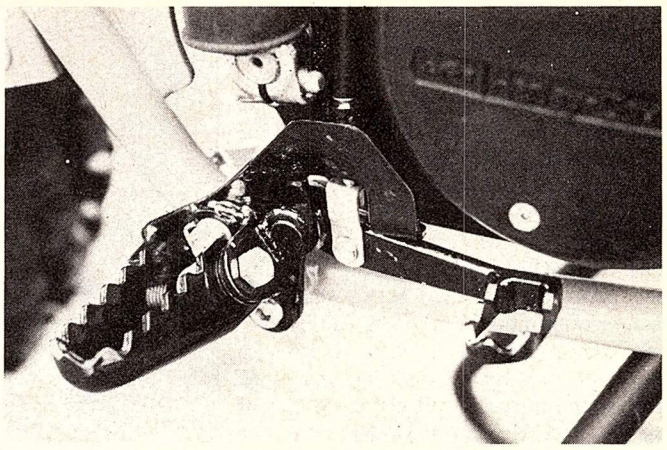
Making a stab at the brakes doesn't result in the instant lock-up that many Japanese bikes exhibit. The rear brake is very progressive and can be used to bring the back end in line on the choppy sections. Dragging the brake in this manner can also bring the bike out of mild hopping in whoops, too. Brake construction and cable operation are two of the big factors in this successful execution.

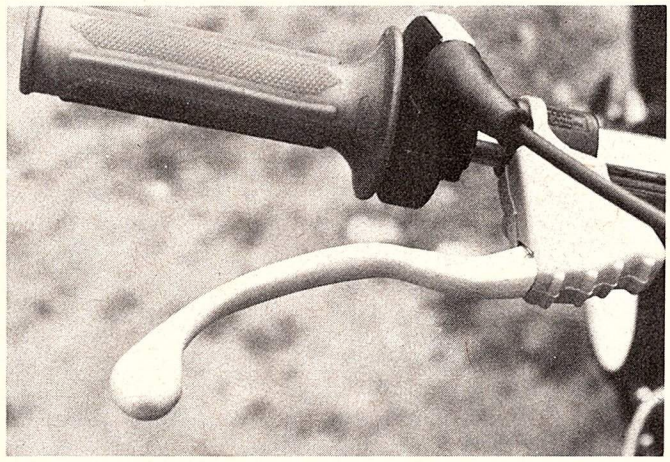
The front brake is a little different. The free length of the cable seems to be too long, causing the actuating arm to be at a fairly severe angle. Not only is it low enough to be susceptible to damage, but the initial pull on the lever has to overcome this "backwards" attitude. This may have been an early production move to utilize existing cables, but it is not correct. This needs attention.

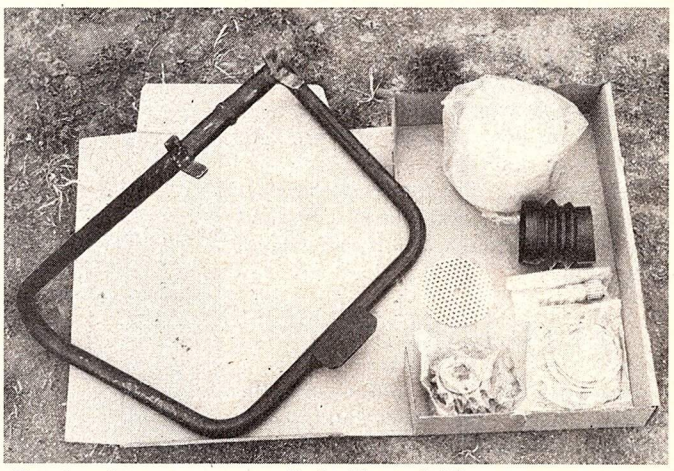
Tires are Cheng Shin. On this track surface we had no complaints. The front sticks really well. Braking and acceleration traction at the back is good. We were skeptical when we first saw the choice of tires, but as it turned out, we made no complaints.

Bars and controls are also tops. Rise and pull back of bars is good. Controls are Thomaselli dog-leg style levers that are touted to be as malleable as the Maguras.

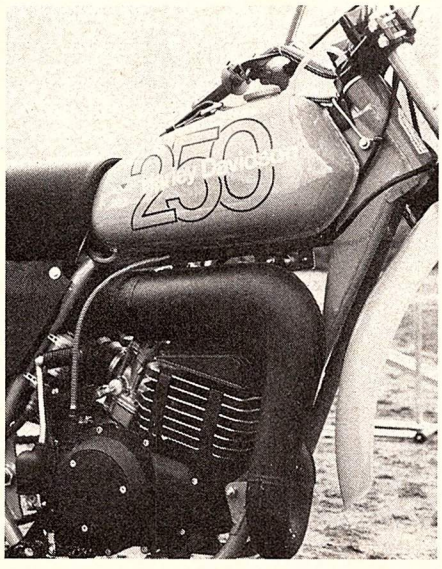
Peg, Seat and bar coordination is good with one exception. More than one rider stuck his foot in a hole after a jump or drop off. The pegs seem to be too low for this much travel. One of the riders suggested coming back and up with the pegs. It is possible to weld a spacer to the top of the

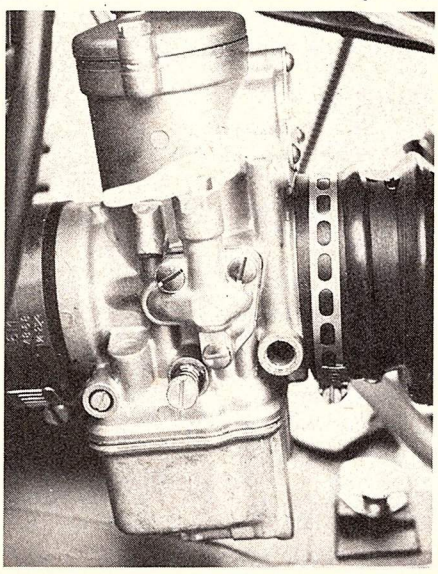


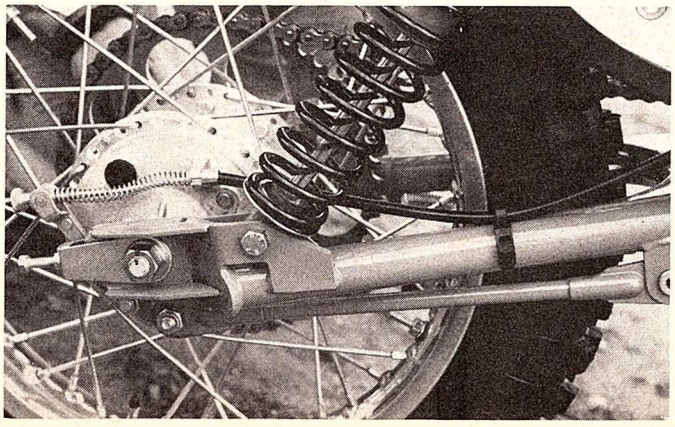


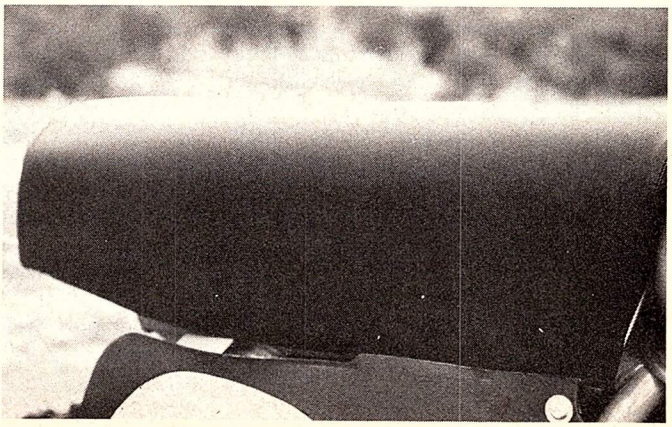


Stand and spares are supplied with each bike.









peg to add some boot height.

The gas tank is a nicely contoured, aluminum container that is held in place with a leather strap. The off set gas cap provides for easy filling. The front of the seat is taller than the tank and makes a smooth transition. Seat shape is rounded and quite comfortable.

Most noticeable as far as rider comfort is concerned, is the bulging number plate/side covers. More than one tester complained—even the tall ones—that they interferred with their legs. To clear the shock bolts and rear pipe mount the covers swell out a couple of inches past these obtrusions. We can only guess that this much room was allotted for access with tools. Reforming the brackets will bring these back in closed. Short riders complained that leaning back would almost force their feet off the pegs. The covers are aluminum and don't give at all.

Fenders are a Preston Petty-type injection molded plastic, are wide and appear to be tough. Both offer good protection.

POWERPLANT

Fed by a Del'Orto 38mm carb, the engine shares the cases and other components with the street/trail Harley 250. The piston features an L-shaped cross section ring that resides in a fire sprayed chrome bore. This method does away with the steel liner and its weight.

Del'Orto was chosen for two reasons: it is an Italian carb; and on dynos, the carb performs better than virtually any other unit. The 38mm D-O is equivalent to a 40mm anything else. (On a past dyno test on the Yam TT-500 we found that the only significant bolt-on power increase came from the addition of this type carb.)

For those non-believers, though, a different air box to carb boot is supplied with the bike to adapt a Mikuni. Also included in the purchase price are a three-way stand, an assortment of sprockets, a spare spark plug, a set of piston rings and another foam air filter. Some very nice equipment that makes the HD a good "buy."

Gear box ratios on the five speeder are close from first through third; then comes a space with fifth very close to fourth. First is tall, so this is definitely a single purpose machine. Close fourth and fifth is actually better for motocross. In most cases, if you are going to use fourth, then it is probably a long straight. The close fifth makes better use of that straight.

The tranny runs on needle bearings and is equipped with a primary start system. Ignition is either Motoplat or Dansi CDI, depending on production availability.

HARLEY-DAVIDSON 250 MX SPECIFICATIONS

Dimensions and Weight

Overall length	83.6 in. (212.5cm)
Handlebar width	34.2 in. (87cm)
Ground clearance	12 in. (30.5cm)
Wheelbase	57.3 in. (145.5cm)
Dry weight	233 lbs. (105kg)
Steering angle	45° L & R
Steering Head angle	30°
Trail	5.5 in. (140mm)
Front suspension	Telescopic oil dampened, 9 in. travel
Rear suspension	Swingarm, oil dampened

Capacities

Fuel tank	2.2 U.S. gals. (8.5 h) no reserve
Transmission	1 quart
Front fork	210cc

Engine

Model designation letter	MX
Type	2 cycle, single cylinder
Bore	72mm
Stroke	59.6mm
Piston displacement	242.6cc
Compression ratio	11.8:1
Lubrication system	Fuel and oil mixture 20:1
Starter system	Primary kick

Transmission System

Clutch	Wet, multi plate
Primary drive pinion gear	22 teeth
Primary drive crown wheel gear	60 teeth
Primary reduction	2.73
Gear ratios:	
First gear	14/28
Second gear	18/28
Third gear	21/26
Fourth gear	21/21
Fifth gear	23/19
Gearshift pattern	1 down, 4 up
Gearbox sprocket	14 teeth
Chain type	Regina HP 5/8 x 3/8

Ignition System

Type	CDI Dansi or CDI Motoplat
Ignition timing	0.100 in. (2.5mm) (21°) before TDC
Trigger air gap	(Dansi) 0.012-0.016 in. (0.30-0.40mm)
Spark plug	Champion N59G
Spark plug electrode gap	0.020 in. (0.5mm)

Carburetor

Type	Dell 'Orto PHB E 38
Venturi dia.	38mm
Main jet	155
Pilot jet	70
Starting jet	75
Throttle valve	40
Jet needle	K2
Needle jet	26C AB
Air screw setting	1-1/2 turns
Air filter	Polyurethane foam element

Wheels and Brakes

Front wheel tire	3.00 x 21
Rear wheel tire	4.50 x 18
Front brake	Internal expanding, single leading shoe type, i.d. 140mm
Rear brake	Internal expanding, single leading shoe type, i.d. 140mm
Rims	Akront, shoulderless light alloy
Spokes	36/wheel, 4mm dia.
Tire pressure	10 psi (0.7kg/cm²) front and rear

PRICE (approx.) $1695.00

The engine design and related components pose the HD as a serious contender on the circuit. Do these pieces add up to a quick bike?

At first we didn't think so. The super tacky track and a near brand new engine made the power feel like an average, good-running 250. But, as the track dried out and the motor loosened up, the Harley took on a different attitude.

The slow building power became an explosion at mid-range that was downright vicious. Before it had balked at any higher rpm, but transformed into an ever-climbing screamer that didn't want to sign off. It had become, in a matter of hours almost a completely different bike.

The good power matched with the superb handling could make this an excellent bike for most riders. It doesn't want to do weird scary things under acceleration, so it isn't just in the domain of the expert rider. It is tractable and the handling, which is at least 75 percent of motocross, makes it a very respectable mount. It does have some minor flaws which we have discussed, but they aren't serious enough to make us not like the bike. And the price is competitive with the Japanese makes. It may just be the next 250 class wonder. ●

HELMETS ON THE HALF-SHELL, A DAY AT ELECTRO

BY PAUL CLIPPER

Ever wonder just what you're paying for when you buy some new gear? Ever think about how something is made, and what makes it cost so much? Are you interested in saving money at the same time as increasing your already vast storehouse of knowledge? And who isn't?

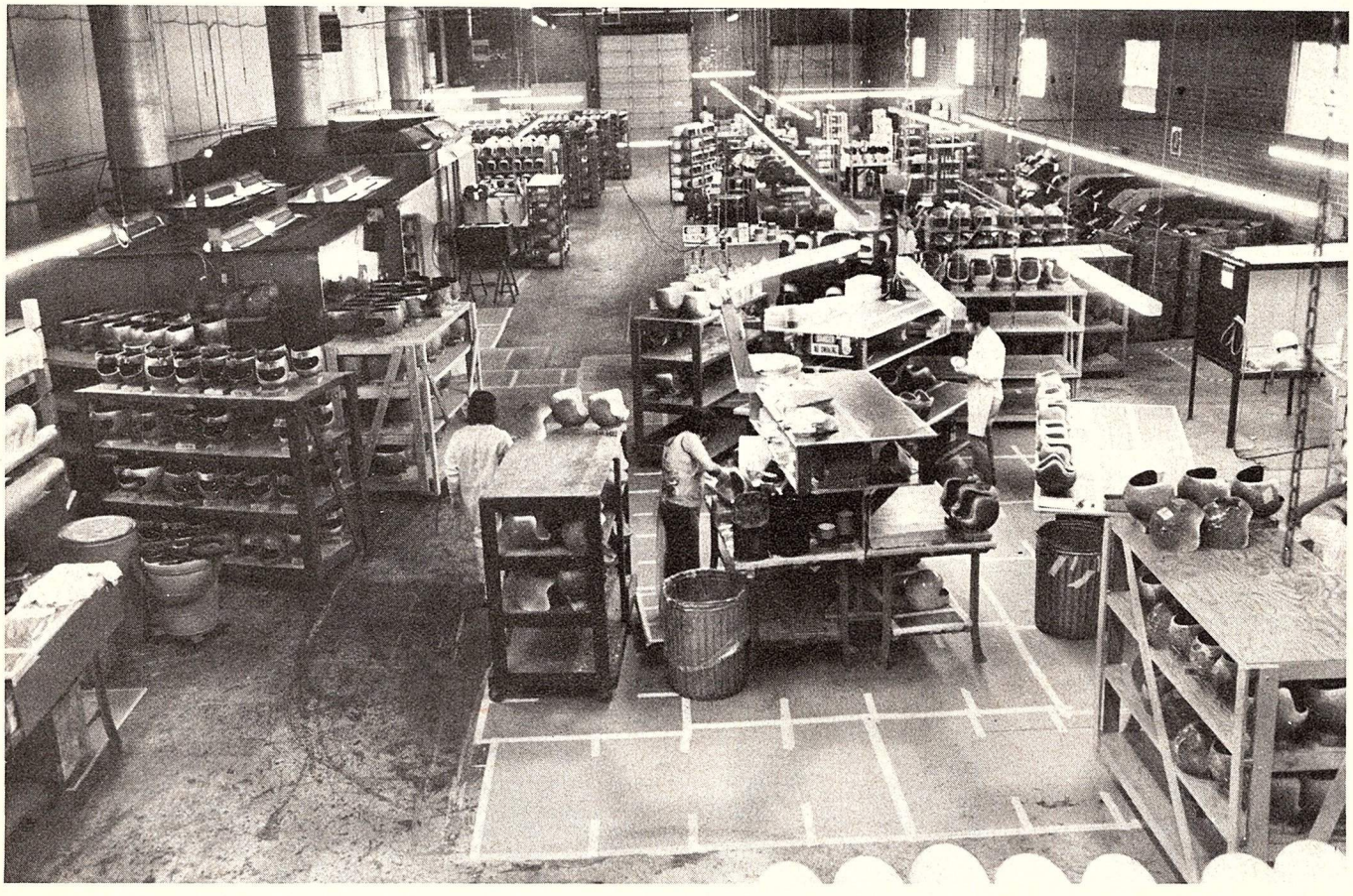
You may have recognized the overline "Insight" at the top of the page from the article last month on Rister Industries. Very good. We forgot to tell you last month that "Insight" was going to be our new trademark for a series of irregular articles aimed at enlightenment and saving money. Meaning to say that the frequency of the articles would be irregular, not the content, dummy! This is the second article of the series. Right!

Last month we told you where to go to get your torn and worn out wearing apparel repaired, and this month we're going to show you around the home of Electrofilm Inc. and learn a little about helmets.

Down the road from us, in North Hollywood, all but hiding in an ordinary industrial park office/factory building, is the home of Electro Helmets, better known as Electrofilm, Inc.

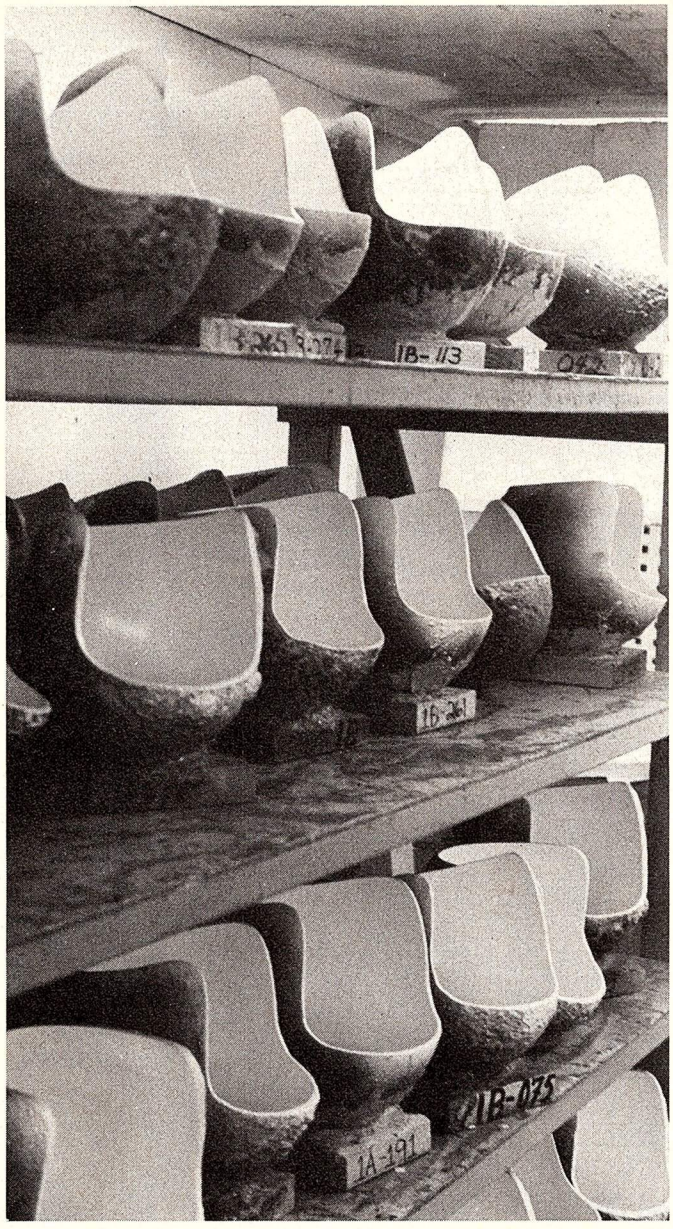
Starting out in a relatively confidential branch of the aerospace industry in the mid- to late forties, Electrofilm, Inc. progressed easily and naturally down the line to become one of the leading manufacturers of quality helmets, and competitive contender in the waterbed heating business. What could be a more natural combination than waterbeds and helmets? Love and marriage? Cheese and crackers? Perhaps, but today we will concern ourselves primarily with the aforementioned headpieces.

Our guide for the day was Jack Kaufman, production manager of the North Hollywood facility, and a more genial and likable person we couldn't have asked for. In the four hour tour and bull session combination we learned more about the helmet business than we could ever print, so an abbreviated sketch is offered, with the hope that the pictures will convey at least a thousand words each towards describing the process.



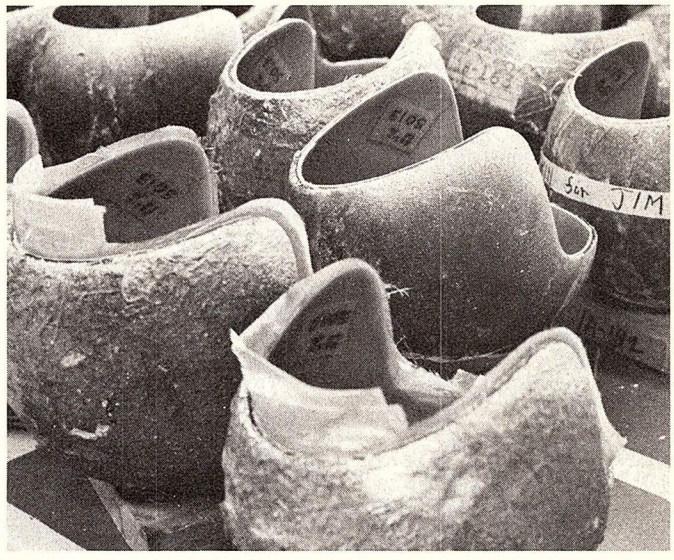
An Abbreviated Sketch

To begin with, we have to stress the extent of quality control evident in the company policy. Absolutely nothing "slides." If there is anything wrong with the construction or finish of *any* helmet along the line, however minute



First the molds are sprayed with the colored gel-coat . . .

. . . then fiberglass cloth and resin is hand laminated . . .



. . . and allowed to cure.

it may be, the helmet or shell or whatever is immediately scrapped. Jack has some of the most unique planters in his office, and that is what a bad shell becomes, if it is not immediately destroyed. The quality control inspections are *constant,* at every step along the line. Not too shabby, huh?

The shell begins life in what is essentially the normal fiberglass process, all done by hand, and then the exterior of the shell is given the impeccable Electro finish, one point their helmets have become famous for. A gloss that appears easily a foot thick stands out on the starting line like no other. Once again quality control is brought up: if the shell sports one bubble in the glass, or one pock mark in the finish it is immediately rejected. And trashed.

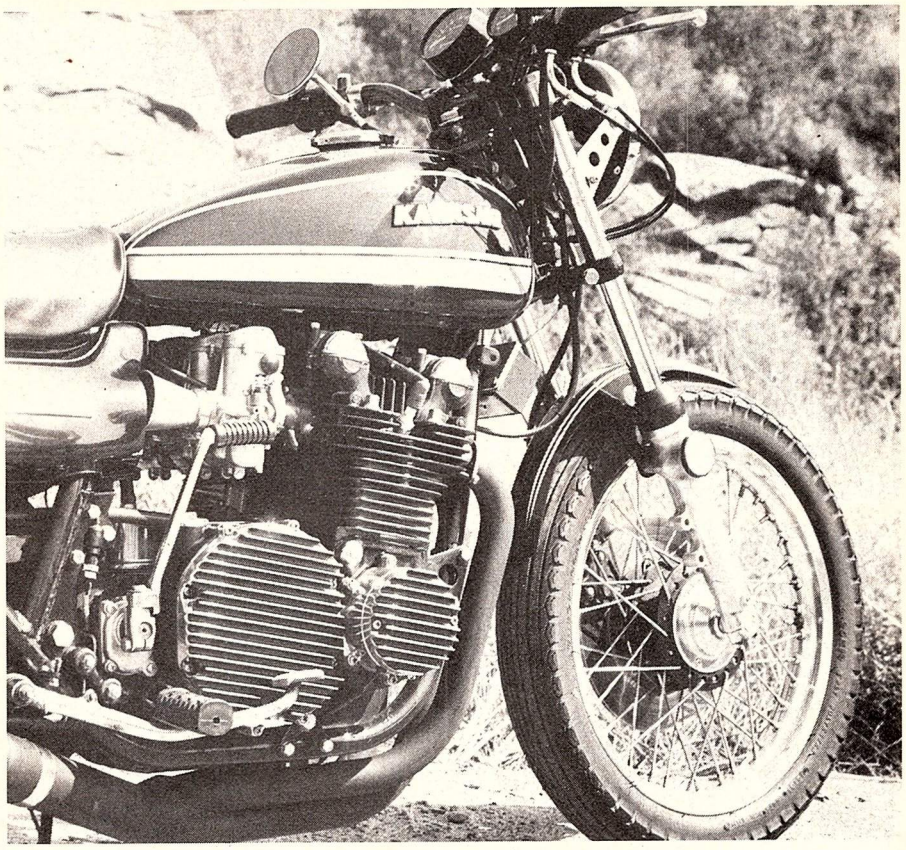
The interior liners are made up and readied to be fitted to the shell. Electro uses one inch thick safety liner, relatively soft when compared to the liners of a few years ago. Considering that the main job of this safety liner is to absorb impact, the improvement over the old liners is amazing. But we'll get into this more after we finish building a helmet.

After the snaps and straps are fitted, and the rubber beading is rolled around the edge, the helmet is ready to go. All these parts, including the liners and comfort pieces, are bought from outside manufacturers with the same eye on quality. For example, the chin straps are one inch wide, as opposed to half or three-quarters of an inch for their competitors. Later on in the day I witnessed one of these chin straps withstand a load force far in excess of the 300 lb. limit (min.) required. Considering that Electro rejects a relatively high percentage of the shells for cosmetic reasons, we were afraid to ask about the finish pieces. You can be sure they'll reject anything that looks funny.

Sounds pretty easy, huh? Nothing could be further from the truth. Sure, the process is relatively simple and straightforward, but consider for a moment the legal position of a helmet manufacturer. Of course, no one can unconditionally guarantee that a helmet is going to save your life, although we all know that it could possibly help quite a bit. But groundless, successful lawsuits are common these days, and it's a safe bet that anyone manufacturing safety equipment is paying more in liability insurance than you or

(Continued on page 67)

KAWASAKI



As is true in this particular case looks can be deceiving. Nothing on the outside tells you about the kind of performance lurking around inside this beast.

1132cc KAWASAKI

MORE HORSEPOWER THAN YOU'LL NEED!

STORY AND PHOTOS BY JEFF PECK

When the chance to ride a super fast Kawasaki comes along I'm like many people, I can't turn the chance down. In this particular case I didn't know what I was getting myself into.

The bike looked like a very normal Z when I first saw it, even when I started it up it didn't do anything out of the ordinary to make me think there was anything different inside the motor. I can remember thinking how smooth it was as I headed down the street and then I grabbed a glance at the speedo and found myself going 80 coming up on a stop sign . . . FAST!

By the time I had pulled the bike down to a stop I knew I had a real tiger by the tail and had to pay attention to where this guided missile was being pointed. After completing a short jaunt around the block, I came back and got a little more information from owner/builder Dan Ford about his super fast Kaw.

It seems that Dan and his partner are in the business of making speed parts for Kawasakis. This bike is a sample of their work and believe me it works. They have been testing their parts extensively for well over 20,000 miles and have not had a failure yet.

All of these miles were not just cruising around town, there were many miles of drag racing both on the street and strip. Along with the racing, this particular bike was used by Dan for a little vacation trip, about 1,800 miles, which last summer took him back to Utah in the middle of the hottest month of the year. All of this has been accomplished without one failure.

This is exactly what Dan feels he and his partner are shooting for. According to Dan, "We designed our kits with the intention of producing a very reliable, ultra fast street bike, I feel we've accomplished this." After spending some time on Dan's bike I have to agree with him.

During the time I had the bike I rode it under every type of road condition I could find, from heavy traffic, to straight wide open roads and tight twisty mountain roads. Under all these different conditions the engine performed very well. It didn't load up in traffic or start acting up as you would expect a high performance motor to do.

Out on the wide open roads the bike literally flew down the asphalt. The machine felt it was going so fast it was flying over all the bumps in the road, it had to be that or else I was concentrating so hard on where I was going I didn't notice the bumps.

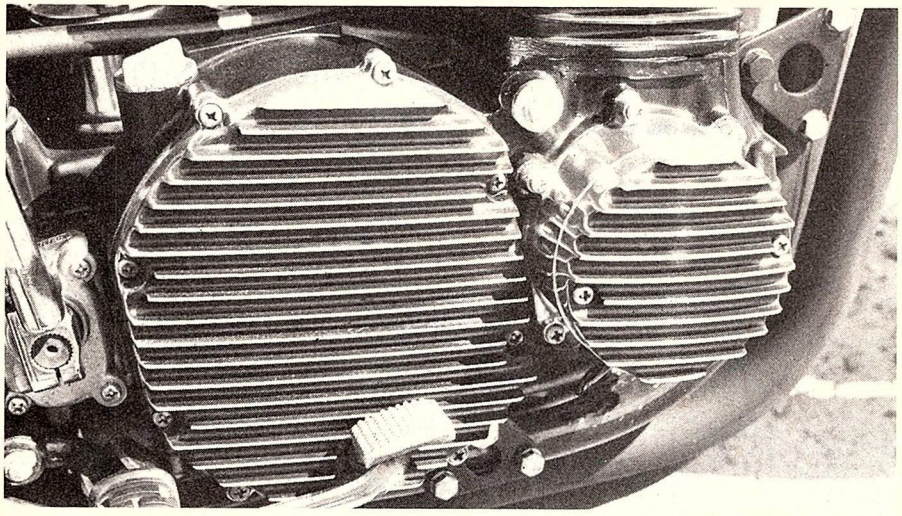
What ever was happening I did notice that the motor seemed to have three distinct powerbands. Up to about 4,000 rpm the bike feels like a crisp running KZ1000, very smooth with rapid acceleration, but very easy to control. After 4,500 t'ings start happening a bit faster especially the way you're passing country side. For most machines this would be THE powerband with very hard acceleration almost to the point of leaving you behind.

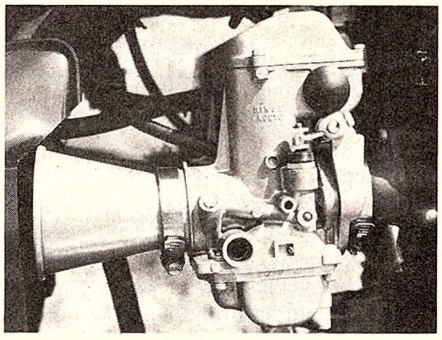
But this motor has something else in store for those of you who wander up into the range beyond 9,000 rpms. The engine virtually explodes with power at this point and if you're not hanging on you will be deposited on the road immediately, if not sooner.

Even with all of this horsepower flowing from the motor it did all of this smoothly and without a hint of vibration. This is one thing that makes the bike very deceiving, it is by no means a toy, nor a pussycat, this is a very serious machine. I realized very quickly it could very likely kill me if I didn't pay attention to what I was doing. Kind of makes you realize your mortality.

Now that you know my personal impressions of the performance of this machine let's take a look at what's happening inside.

As tested the Kawasaki engine was punched out to 1132cc with a compression ratio of 9.6:1. Norris Super Magnum cams, not degreed in, were used to add quite a bit of punch to this big motor. The head had some porting work done to it and Mikuni smooth bore carbs helped the breathing quite a



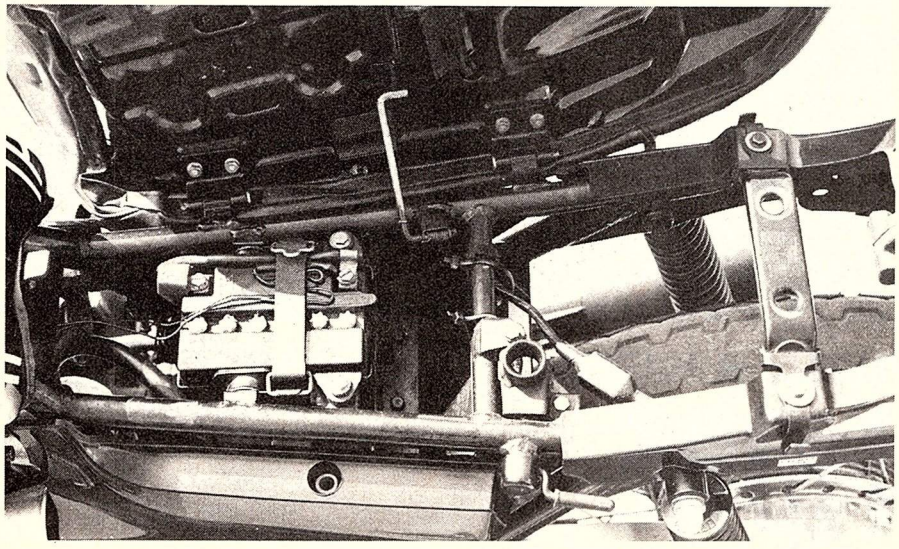


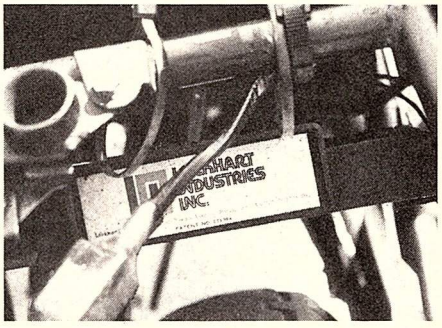
Mikuni Smooth Bore carbs help flow a large amount of air into the 1132cc motor.

Slick looking finned side covers add an interesting look to the Kawasaki.

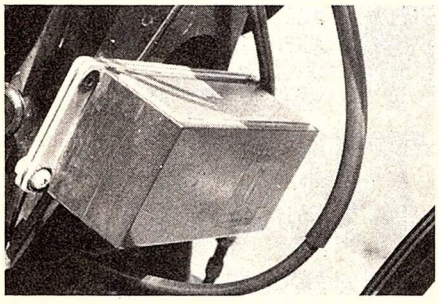
Underneath the seat you can see some things have been removed in an attempt to save some weight.

Instead of mounting the Lockhart oil cooler in the usual location behind the front forks, Dan has his hidden in front of the back tire underneath the seat.



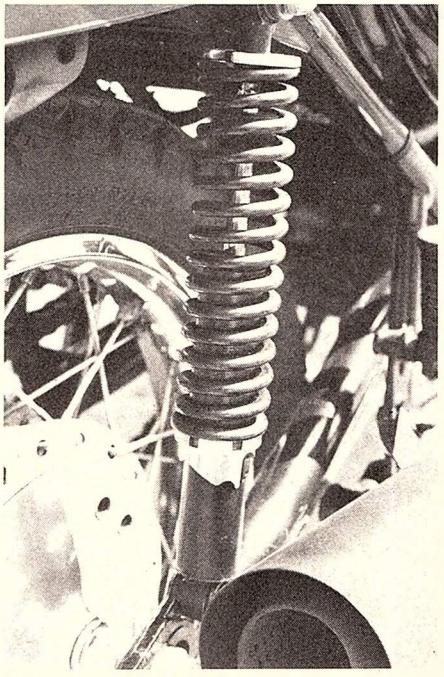


Koni shocks replace the stock dampers which everybody knows are only good for weighting down the bottom of trash cans.

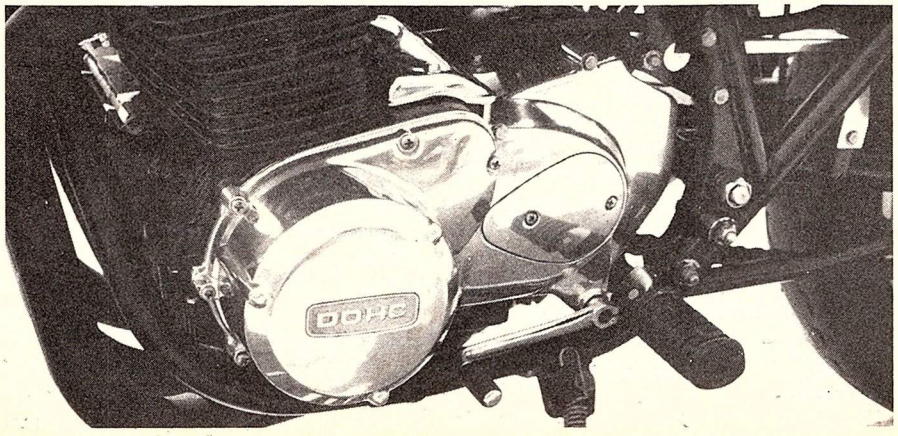


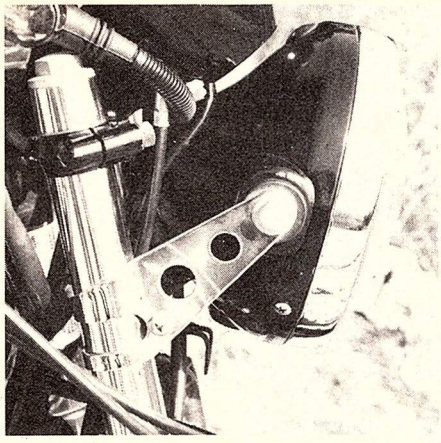
Gerex CDI adds zap to the ignition system and relieves worry about points breaking down. This is important in a bike that performs as well as this one does.

In search of some very elusive traction this big motor eats tires like they're candy.

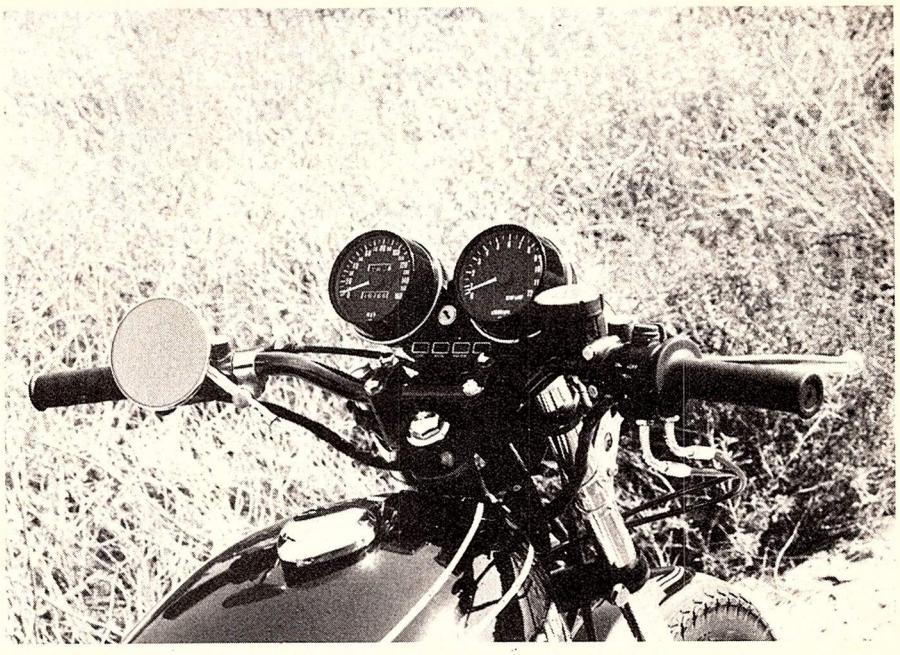


Highly polished side covers offset the total blackness of the cylinders and cases.

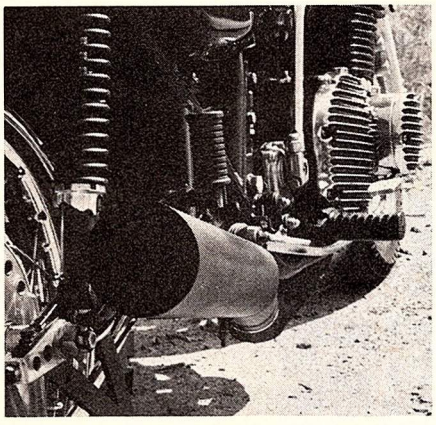




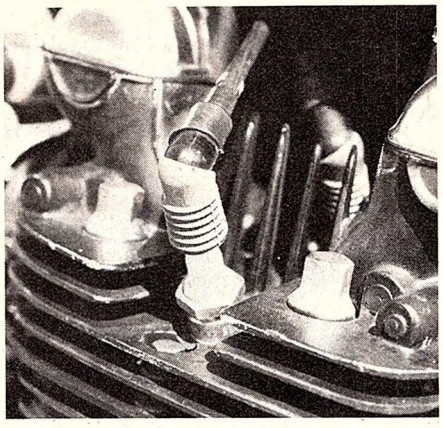
Tricky little bracket cleans up the overall appearance of the front end.



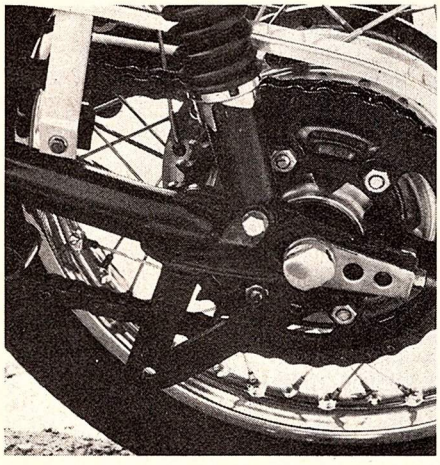
Touring bars help pull you down out of the high winds.



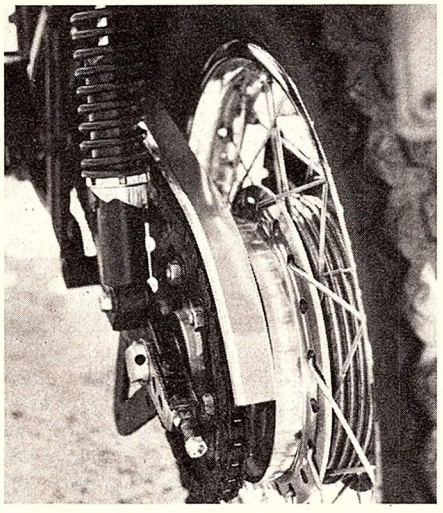
This new Daytona system tucks closely into the bottom of the bike and still delivers very good performance. Look for a full evaluation of this pipe next month.



Stock resistor type caps have been replaced with high performance models. Every little bit helps.



Brackets were added to the bottom of the swingarm to allow the use of a wheelie bar. This thing really needs one.



The stock chain guard was replaced with this lightweight aluminum model.

bit. Exhaust is handled by a new system named Daytona Performance Products, which seems to be heavily influenced by George Kerker.

All the pistons sold by Competition Engineering, except their 1016cc cast pistons, are designed by Dan and his partner and manufactured for them by ForgedTrue. All of the Competition Engineering pistons will clear the stock combustion chamber, which means less work during installation.

Something else that's very nice about the CE pistons and wrist pins is they weigh the same as the stock pin/piston combination. This is the reason the motor runs so smooth and revs so quickly. The reason behind using pistons the same weight as the stockers is because the crankshaft is designed with a certain counterbalance for the weight of the piston on the end of the rod. If the piston weighs more than the stockers you get crankshaft whip and vibrations.

Out on the drag strip the same bike was run with the exception of the smooth bore carbs and the head work and it ran flat 11.0's at 123.65. This was without the use of wheelie bars, which caused the rider to back out of it to get the bike under control. Weight on the bike at the strip was 495 pounds, which isn't exactly light.

The reason the testing on the strip was done with just pistons and cams was to see how the bikes would perform for the average customer. Most people will put an engine kit and have it installed without porting the head or degreeing the cams in. Also many people don't use wheelie bars or bother to lighten up their bikes. As you can see the performance was still impressive.

If you're looking around for a big bore kit to install in your Kawasaki, talk to the guys who design the parts and find out how they do their testing and if they do much testing on the street. If a big bore kit gives you performance and reliability then that's what you want, anything else would be selling yourself short.

For more information on Competition Engineering's complete line of performance parts for the Kawasakis write to: Competition Engineering, 512 Burchett St., Glendale, CA 91203, (213) 244-8560. ●

Can-Am has been on the track for quite a while. A couple years ago if you thought about getting a competitively serious enduro bike, Can-Am was one of the four or five names that really warranted consideration. Its power was undisputed. Abundant and fast. Its reliability was proven over and over again in not only local events, but in National enduros, Two-Days, and of course, the Six-Days. And they came at a price that undercut the Pentons and Huskies by hundreds of dollars.

Of course, Can-Am, still being a relative new company, had to undergc its growing pains, and like any conscientious manufacturer, keep close attention on further developing the overall package of their bikes.

Presently there is more competition in the enduro bike field, and in appropriate response, Can-Am had this year introduced their new line of Qualifiers in an attempt to keep themselves in the front running.

rain and a 100-mile enduro, we found that the tighter the trail, and the looser the ground, the better we liked the handling.

Picking through rocky sections, or weaving down a tight, winding trail was effortless and was where the machine really showed its response to the rider's wishes. Turning was very sure and controllable as long as the tires had something to bite into.

But one of the nicer features of a Can-Am is the adjustable steering head angle, and in this lies the key to producing a different handling behavior. It is adjustable in ½° increments from 25° to 31°. Our bike was delivered with the angle set at 29°, which accounts somewhat for the bike's preference for the tighter sections. As the speed was increased, and especially in whoops, the bike took on a noticeably more unstable, squirrelier feel, which is why we didn't get along with fast desert sections real well.

AND NOW THE TEST . . .

CAN-AM 175 QUALIFIER

Little Brother Of Skip's Bike

BY RIK PAUL

The 175 Qualifier is basically a hybrid derived from the previous T'NT Off Road model and the MX. The rotary-valved engine is what had been taken from the T'NT. It uses the CDI ignition, with a lighter flywheel than previously. This has the effect of making it a bit peakier, and giving it quicker throttle response. It also uses the same O.R. Six-speed trans, which is well spaced and reliable.

The rest of the bike has been adapted from the MX mold, including the frame geometry and suspension. This area is where the Can-Ams have always been most vulnerable, and while a move to the MX-influenced design is a step forward, it is still the sore point of the package.

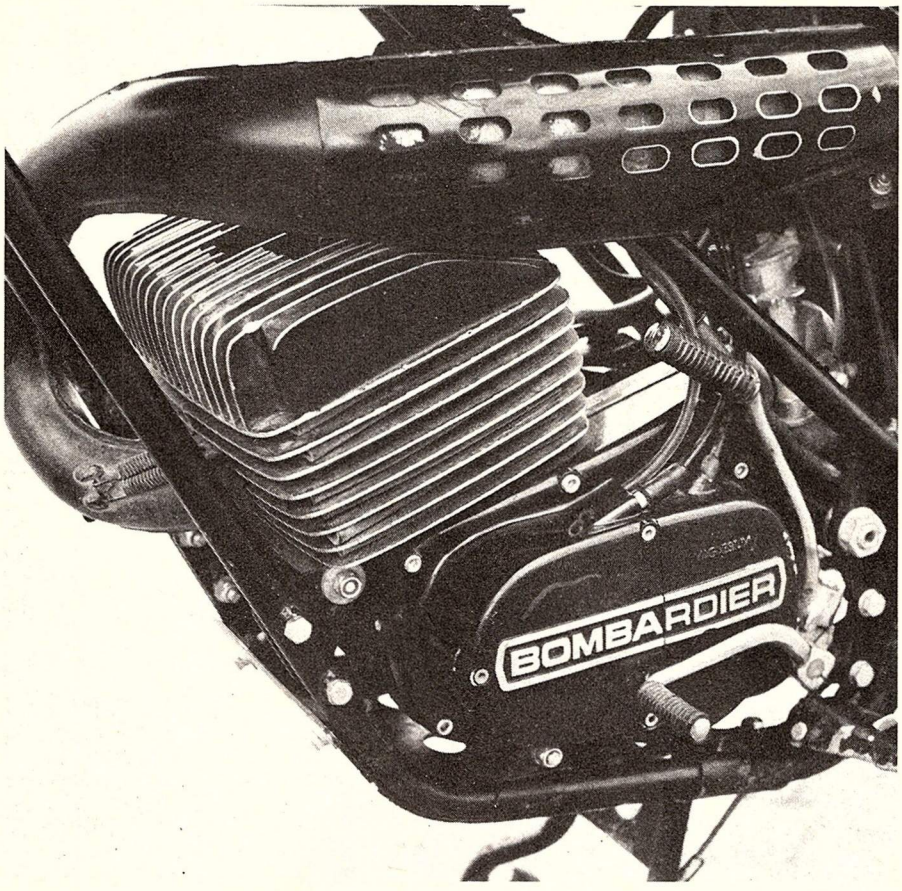
The 175 Qualifier, in completely stock form, struck us as being a more eastern or northern oriented machine, than southwestern. But the emphasis must be placed on the term *completely stock.* In our experience with it, which includes a considerable variety of ter-

We inquired about this, and were told that one solution that has been reached is to set the angle at 30½°. At this setting, we were told, the bike takes on a much more controllable feel at high speeds, while still maintaining good tight section control. Unfortunately the angle adjustment necessitates different steering head cones and, none were available to us before deadline to try out this solution. It is something we'll be working with in the future, though.

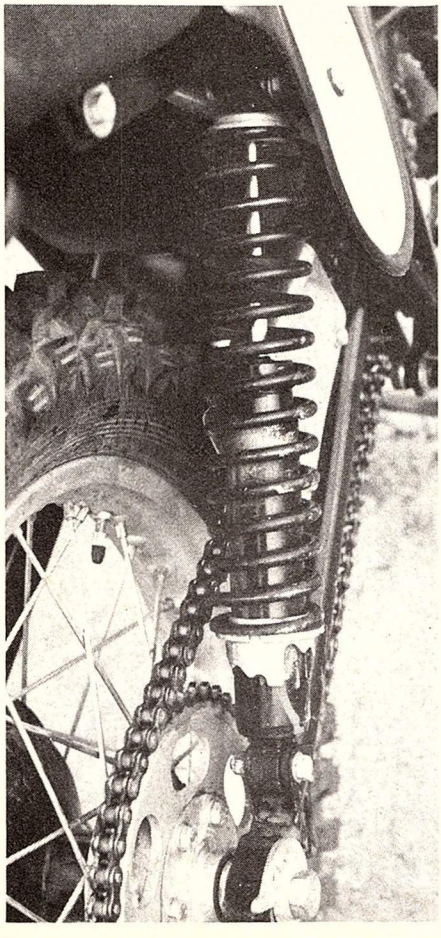
As a temporary corrective measure for the high speed stuff, we tried switching to a ½" shorter S&W shock with Number One Products springs. This reduced the unstable front end effect, and also reduced the stock Gabriel shocks' tankslapping tendencies over whoops, but then consistently bottomed the rear tire into the underside of the fender.

The stock Canadian Gabriel shocks is the other major sore point in the package. They come much too soft,

175



The engine is the basic T'NT O.R. model with a smaller flywheel, giving it a peakier feel.

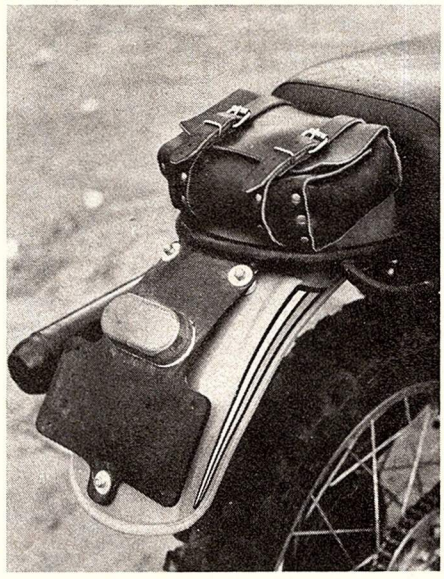


Canadian Gabriel shocks are dismal.

ready to bottom at a moment's notice, and, as mentioned, develop distinct side-to-side tendencies over rough whoopdies. They are the only items that we feel should be immediately replaced to let the Qualifier realize its inherent potential.

The Betor forks, on the other hand, are much more cooperative, and got their job done with a minimum of discord.

Another point we found that exercises a distinct influence on the handling, especially in the turning characteristics, is the Cheng Shin tires. While residing in the east, where the dirt is loose enough to provide a good amount of traction, we never had any problem with Cheng Shins. And here, also, they were no problem in the sand. But in one area to which we took the Qualifier, the tires' grabbing qualities changed from Jeckel to Hyde. It was all hard pack fireroads, and bare rock, and once on this, the previous steady and sure turning transformed into a personality of washing out and sliding sideways at every turn.



Stock leather tool bag is securely attached to the rear fender.

This, of course, is nothing new, and is a blatant turning effect of most bikes on such ground. Metzlers would help, or perhaps, better yet, Barums, with the wrap around in the front. For the vast majority of owners, however, the Cheng Shins will be quite fine.

The attention to noise that Can-Am has paid merits a few rounds of applause. The pipe, though somewhat bulbous, is extremely quiet, and makes the bike a real pleasure to kick over. In addition, rubber noise reducers have been inserted between all the fins on the head and cylinder, to further reduce dbs.

The carburetor is a 32mm Bing, and

like most Bings works at its best at full throttle. It had a strong tendency to load up when the bike was laid over, or even while inching down a fairly steep hill, and then would require much kicking to revive.

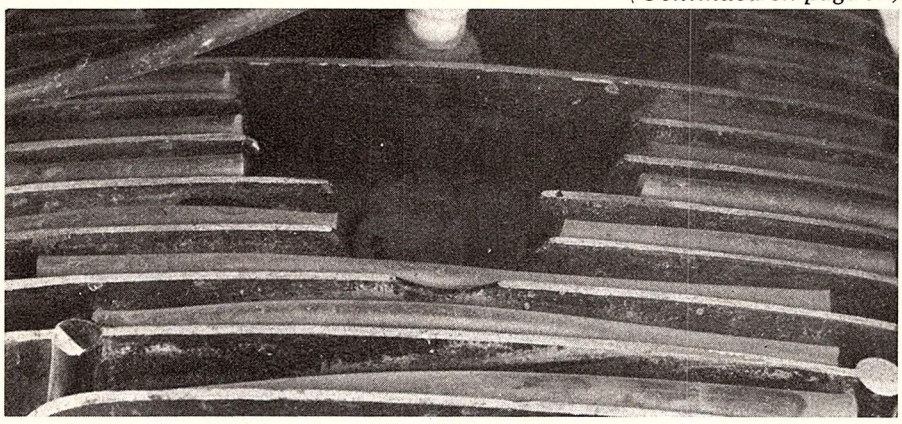
The air filter setup is impressive in its ease and simplicity. It's an oiled foam unit, held by three springs between a cage and metal ring, and sits right on top of the bike, under the seat. The three springs are easily hooked and unhooked for removing and installing the element. The underside of the seat is designed in conjunction with the top of the air box to provide very thorough protection for the filter. Water would have to be over the bottom of the seat to cause problems, and if it's up that high, you've more than likely taken the wrong line anyway.

The Qualifier comes with a center stand that, while making chain adjustments, etc., easier, still could be improved. It locks and unlocks easily with just a kick, and when it's up it also doubles as a chain tensioner/guide. This feature also makes determining chain slack easier when the stand is down. The bottom feet, however, are not large enough and it doesn't sit right in loose dirt.

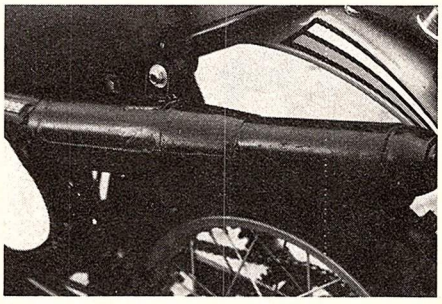
The fenders and tank are red and plastic. The tank holds three gallons which lasts quite awhile.

A chain guard is incorporated into the case, around the countershaft sprocket, to save the cases from being demolished in the event of chain breakage.

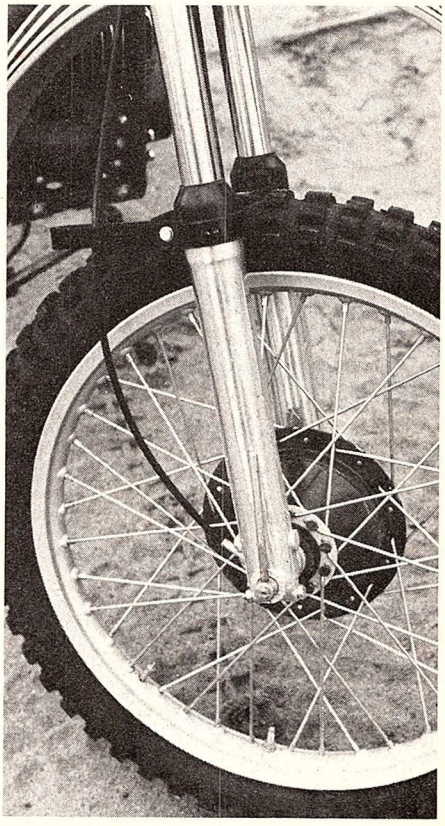
(Continued on page 72)



Fin noise is reduced by the abundant use of rubber strips between them.



The pipe is a bit protruberant but very quiet.



Cheng-Shin tires worked well as long as they had something to dig into.

SUZUKI RM-100B small caliber bullet

BY THE STAFF OF MODERN CYCLE

Recently, during one of the weekend races, we sauntered over to the starting line to watch the 125 novice class go at each other.

One young rider pushed his bike up to the line, rocked it back and forth until he found the optimum position and started to scrape up dirt with his foot. He very neatly piled up a mound of loose dirt and tamped it with his foot. He then went to the other side of the bike and repeated this rite.

With the mounds built up to about three or four inches, he stood carefully on his tiptoes and threw a leg over his new RM-125B. Now gracefully balanced on the very tips of his boots, he leaned forward and waited for the gate to fall.

After the pack roared off to its inevitable first turn melee, we checked out the rest of the starting line. On each side of the freshly dug trenches were small pyramids made of chunks of rocks and wood. One pit crew member picked up the two red brick "starting blocks" and headed back to his pits.

This strange behavior, we determined, is a direct result of the long travel built into today's bikes. For the first time, we had to consider that maybe a choice of racing bikes be not on riding skill and age alone, but on physical size.

With all the competitive 125s on the tall side, we decided to search for a short machine that could do battle in the one and a quarter class. We decided not to limit the displacement. The bike need only be competitive.

What we came up with is the Suzuki RM-100B. For all intents and purposes, the bike is just a short 125. If you don't include a lot of sticky, uphill tracks in your racing agenda, the 100 will run with the 125s.

If, on the other hand, you live in an area where they actually organize

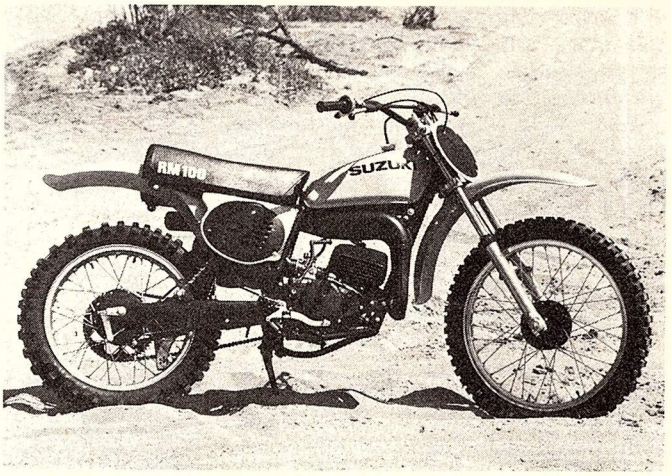
SHOCK CONVERSION

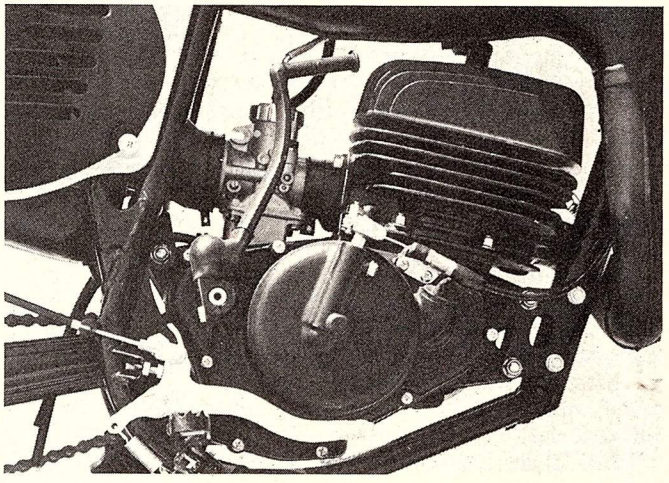
To gain added travel and make the RM-100B turn quicker, we installed a pair of S&W freon shocks.

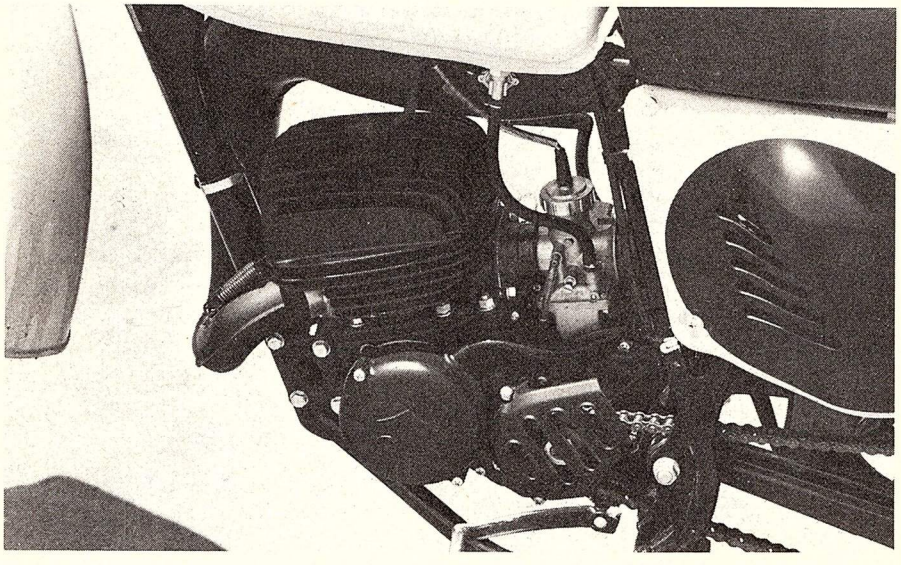
A number of 100 class hot shoes have been using this combination of shock/spring with success for some time. Joe Dee won the A.M.A. Las Vegas Grand National Championship two years in a row with this set up. Also Rudy Dickinson, of R&D Racing Engines runs them on his RMs. Rudy is getting a reputation for tuning some fast minis and 100's on the West Coast.

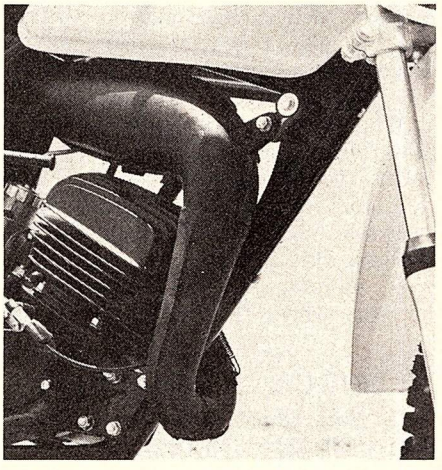
The shocks are 14¼-in. freon cell shocks (Part No. F-525-9) and 85/115 S&W springs (Part No. SP-128515-10). They are available from good tuners everywhere for just over $90.00.

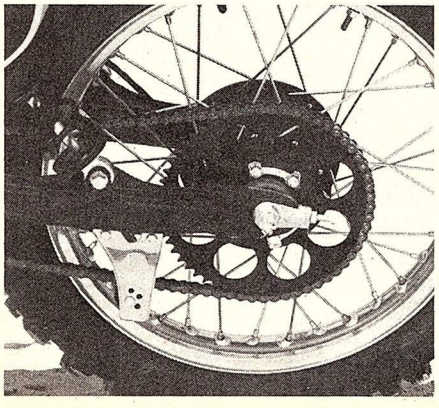
Shocks (pair)	$69.90
Springs (pair)	21.68

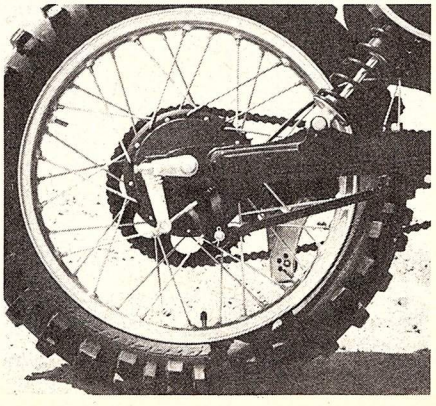

RM100
SUZUKI











100cc races, then this is one of the class killers.

EVOLUTION

This little bullet is, as the other RM's are, in a constantly evolving state. The 100, as it changes from last year's offering, incorporates some of the components of it's slightly larger brother.

The evolution of the RM-100 is led by the new engine. Now incorporating the piston port/reed valve intake system that is shared by the rest of the RM clan, the Suzuki powerplant design is a proven winner. The cases appear to be very similar to the 125, with the same magneto, clutch and transmission layout.

Transmission ratios for the six speeder are in fact the same as the 125B. The ratios are correct for the 100, although a little more clutch fanning is necessary exiting slow corners. This, we felt, is because of engine size and not gearing.

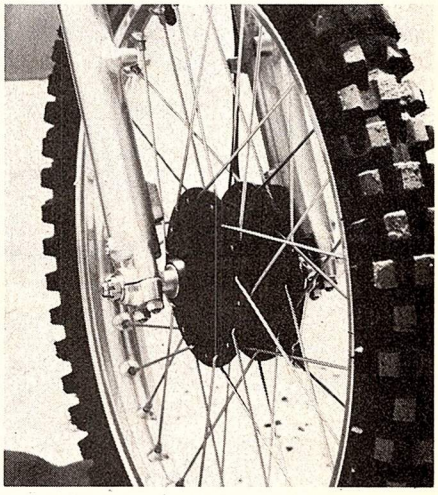
Despite the continual use of the clutch, our test unit never faded, slipped or dragged during the thrashing it received for nearly a month. Clutch actuation is the usual Japanese "light touch." Two fingers is all that is necessary for disengagement.

Carburetion for the 50 by 50 "square" engine is via Mikuni VM30SS. Jetting for our altitude (virtually sea level) is proper. We experienced no dingling in mid-range as so many of the 100-125s exhibit. (To achieve the snap at mid-range, most of the small bikes are jetted lean in this transition phase. Riding the bikes at mid-throttle will usually incite a certain amount of detonation.)

The engine is not the only similarity to the RM-125. The frame appears to be the same geometry as the "A" model. The steering head angle is slightly steeper but this is more a result of the short travel forks, than a frame design change. "A" model triple clamps and stem are also incorporated. This shows further evidence of the continuing development of this series. The large triple clamps have more than enough meat to provide enlargement of the fork tubes from the current 32mm.

The swingarm is the new box section type used on the newer 125s, but the shocks are only 13.5 inches long. The short shocks and short forks (6.2 in. travel) result in a lower seat height. Ground clearance is 2.8 in. less than the new 125's. For the short rider, this might be the answer to the increasingly taller 125 class machines.

The shocks mentioned are Showa units. Although they performed well we decided to experiment some. To make the handling more precise and increase travel, we bolted on some S&W freon shocks that are ¾ inch longer. This made a great change in turning. The longer shocks tipped the steering angle steeper and provided a lot more front end bite.



We put most of our time on this particular set up. At first we speculated on the effect of the longer shocks on the forks. But as it turned out, no noticeable weight increase was transferred to the forks after the switch. Action and damping is good. Air caps and soft springs, with the corresponding damper changes would be better, we feel, if past results with this type mod are any indication. Leave them stock until you learn to ride to this level, we suggest.

Seat, tank, side covers and controls are quality, standard RM equipment. Many of the components interchange with the larger Suzi MXer.

Brakes, hubs and rims are also carry overs of the 125A. The cable-operated rear brake showed no signs of chatter, which is unusual for a small displacement bike. Light flywheels with consequent low inertia, coupled with small engines (that as a rule have no low end power) usually cause the rear brake to lock up easily and chatter or even stall the engine. Although it is not a floating unit, it seems to be the perfect

(Continued on page 78)

TWELVE HOUR UPDATE

TT-500 PIPE SWITCH

Shoemaker's Tip

BY RONDO TALBOT

In our quest to make the most reliable, lightest, best handling and most responsive Yamaha TT-500D around, we scrapped the stock pipe in one of the past issues.

Although the stock silencer/spark arrester was admirably quiet—exceptionally quiet—it was profoundly heavy. The first pipe we switched to saved a full 13 lbs. over the weight of the stock pipe assembly.

This pipe was an excellent choice for obtaining more grunt down low and in mid range. The pipe dimensions and the silencer choice were the determining factors in this power output. We found this power ideal for most riding situations, with the exceptions of fireroading and TT racing.

The two disadvantages as far as we were concerned were that the pipe was entirely too loud, and that the rear portion of the pipe was routed around the right rear shock. This positioning interferes with kick starting, especially in a hole, gully or any other tight situations. One or two good low sides bent the silencer into the shock, so this position is not favorable.

The design and routing of the stock head pipe was just fine, all we really needed to do was get rid of the rear section.

That's where Larry Shoemaker came to the rescue. He fabricates the rear pipe section and adds a Super Trapp Silencer/spark arrester.

The pipe stays behind the shock like the stocker, and the silencer is quiet. The Super Trapp is one of the few tunable exhaust systems. By varying the number of discs in the unit, one can obtain different power characteristics. Adding discs decreases the back pressure and allows higher revs. Subtracting the discs increases back pressure and provides more torque at lower rpm.

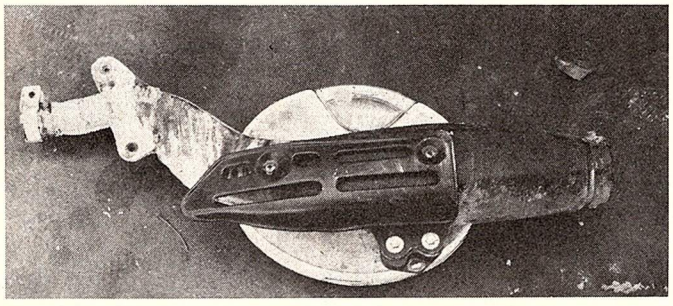
One drawback, if you can call it that, is the more discs the louder the silencers. But it is easy enough to find a happy medium between power and silence. Jetting may be necessary depending on your location and carburetion.

We added discs until we ended up with 24 for a stint on the TT track. For woods riding we went down to 16. Surprisingly we didn't have to jet for either extreme.

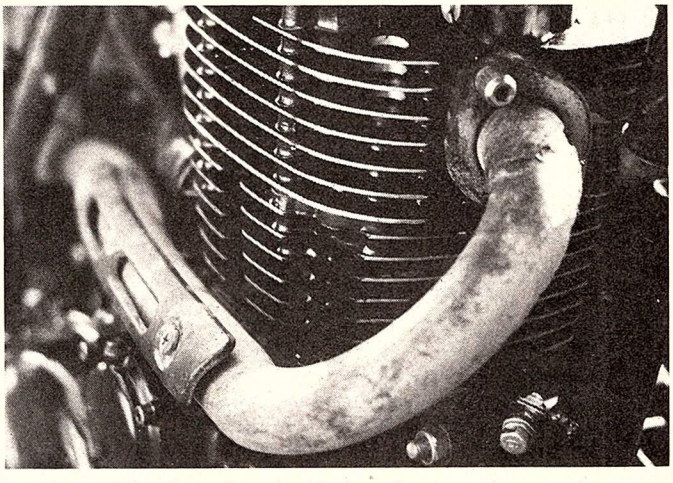
Shoemaker offers the rear section for TT-500D owners and the entire up pipe for owners of the XT/TT-500C.

Pipe and silencer only $39.95
Complete pipe $59.95
Extra silencer discs, 4 per pack ..... $ 3.00

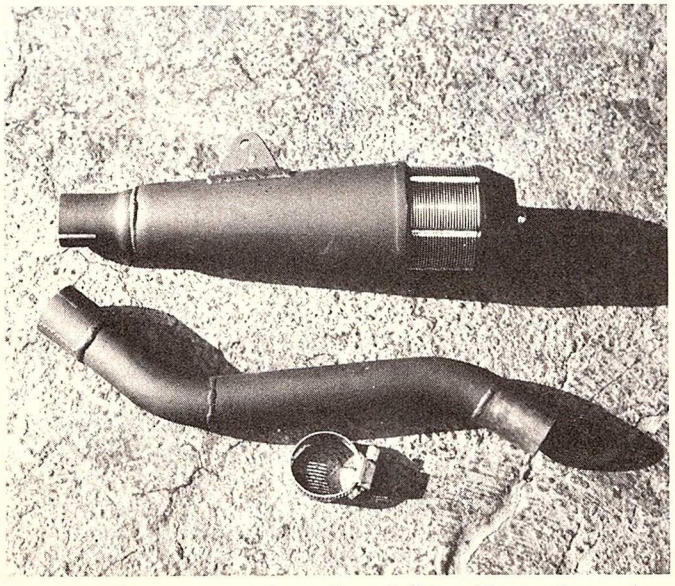
SHOEMAKER'S CYCLE SERVICE
7225 Canoga Ave.
Canoga Park, CA 91303
(213) 346-0472 ●



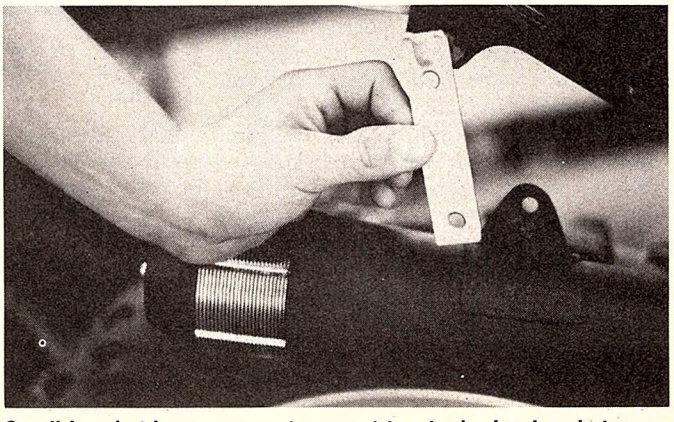
Sixteen pounds of ugly fat! Got to go!



Stock headpipe is well tucked in, needs no replacement.



Pipe includes rear extension only and Super Trapp silencer/spark arrester.



Small bracket is necessary to mount to stock pipe bracket on frame.

ANOTHER TEST OF ABUSE

HONDA MR 175

Something To Write Home About

BY PAUL CLIPPER

Dear Supe—

Hey, how's things going? What's new with the gang down Blackwood? You can tell everybody there that one day I'm going to show up in the pits with my RM and whip the snot out of the bunch of them, the slugs. Just make sure it's raining (when isn't it?).

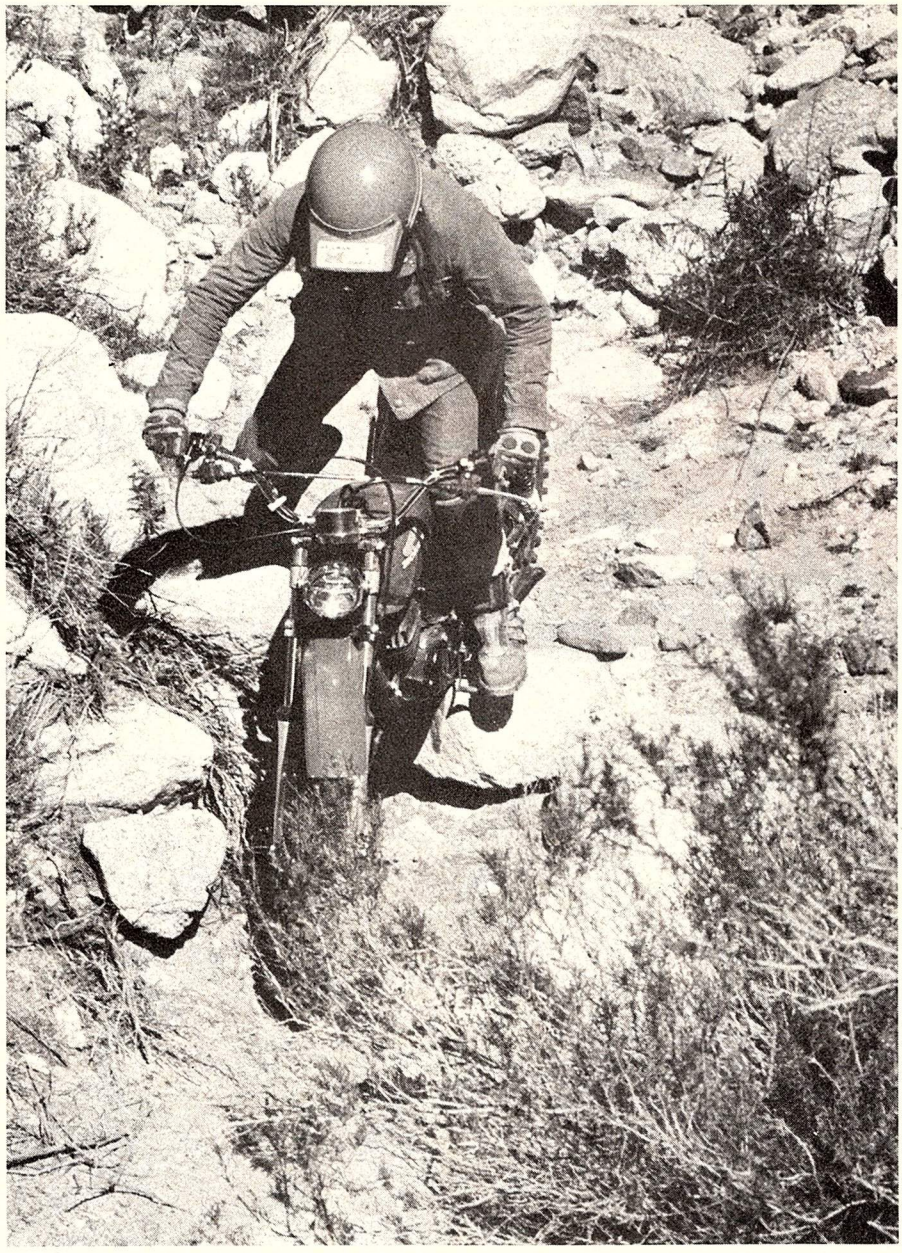
Boy, that's one thing we could use out here right about now, a good eastern shower. You know the type, raining steadily for three weeks at about three inches a day. My system screams for mud! Especially the kind that grows in the dark bogs, the stuff that stinks so much. Do you remember the third check in the Pine Barons enduro, 1975? After being waist deep in the stuff we must have smelled like thirteen devils. It's a shame about the checkers, though. Their survivors spoke highly of them.

I could have used some of that mud the other day, when I was riding the MR-175. It almost seems that California wasn't made for dirt bikes. The lack of traction found in the soil locally makes almost every bike handle like a scared rabbit. I haven't tried using class "C" tires yet, but I'm seriously considering it.

The MR suffered greatly along those lines. What with the lack of usable horsepower and the stock knobs, if I rode it hard it would turn into a real handful at the worst times. Just yesterday I pulled a three-point ice racer number while rounding the side of a hill, and came damn close to dropping off of a six-foot ledge. Not the best thing for your knee, especially in the marbles. And I'm sure AHM wouldn't want me throwing their bike off a cliff. It's not proper etiquette by a long shot.

If I remember correctly, your MR is a '76. Funny, it seems that the only thing that's new on the one I'm riding is the transmission and the tag on the steering head. It says 1977 on it. There you go, change your tag and you've almost got a new bike. Of course there's not much there that needed change, unless Honda wanted to do a major on it. The motor's still a little gutless, and there's still a big jump between 4th and 5th gear. It almost seems that the transmission was designed for a more powerful engine, but that's foolish. It's an MT transmission, and we know what *they* were like.

What can I say? Picking it up was like loading *your* bike on the morning of an enduro. Say hello to an old friend. The bars are the same, so's the airbox. Ditto for the seat, tank, controls, cases, carb and hubs. The rims are still the excellent DID numbers, the fenders are red. Ho hum. It's still a very good looking, clean motorcycle. And it's still just as much of a stone gas to ride.



Lack of low end torque makes for some surprise moments when picking through rocks.

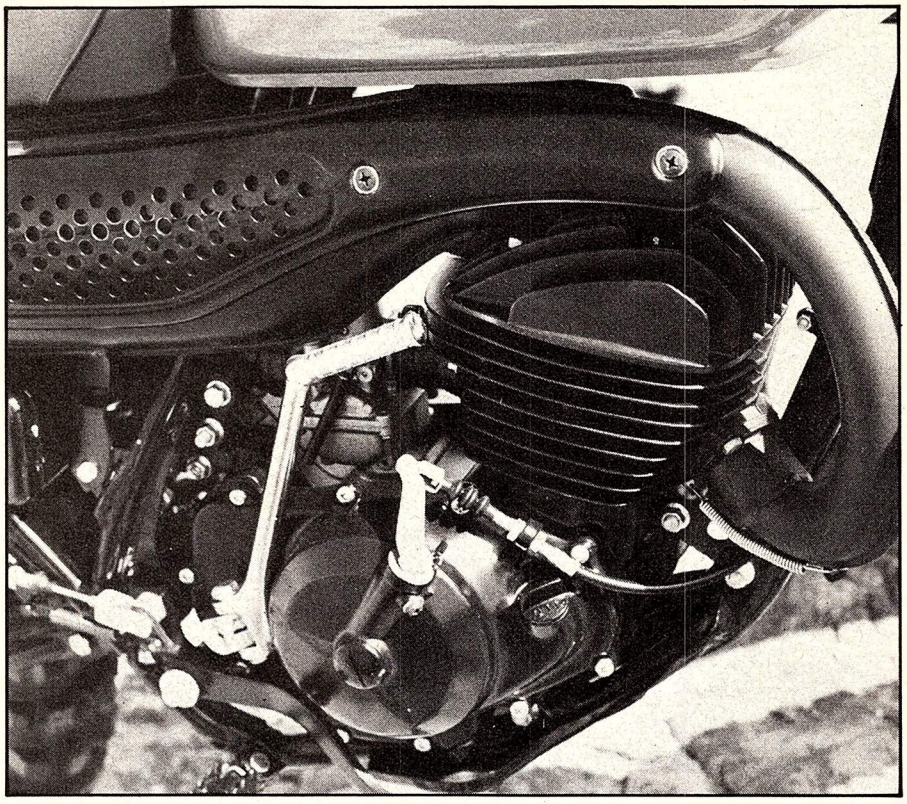
I like it. Oh sure, I snivel constantly about the lack of power, the titanium flywheel, that gap between fourth and fifth and the lack of suspension. But hey, why try to make it competitive when I'm not?

Listen: The first time I rode it was in the desert. First time *I* rode in the desert, too. Sand and sagebrush. Joshua trees and rocks. A dry lake comes up: TAP that sucker out! Sixty miles an hour feels like standing still, smoother than a ballroom floor. Wish the freeways were like that.

Off into the rocks, and the MR's at home. I always was impressed by the handling of your bike and this one's the same. Good steering, easy to get along with. Feels just a little short in the sand, but the tighter it gets, the better it feels.

Only complaint here is the suspension. The forks are all right, no complaint there, but for fast moving it needs a few more inches in the rear. Four just doesn't make it. A change to long travel shocks may be just the ticket.

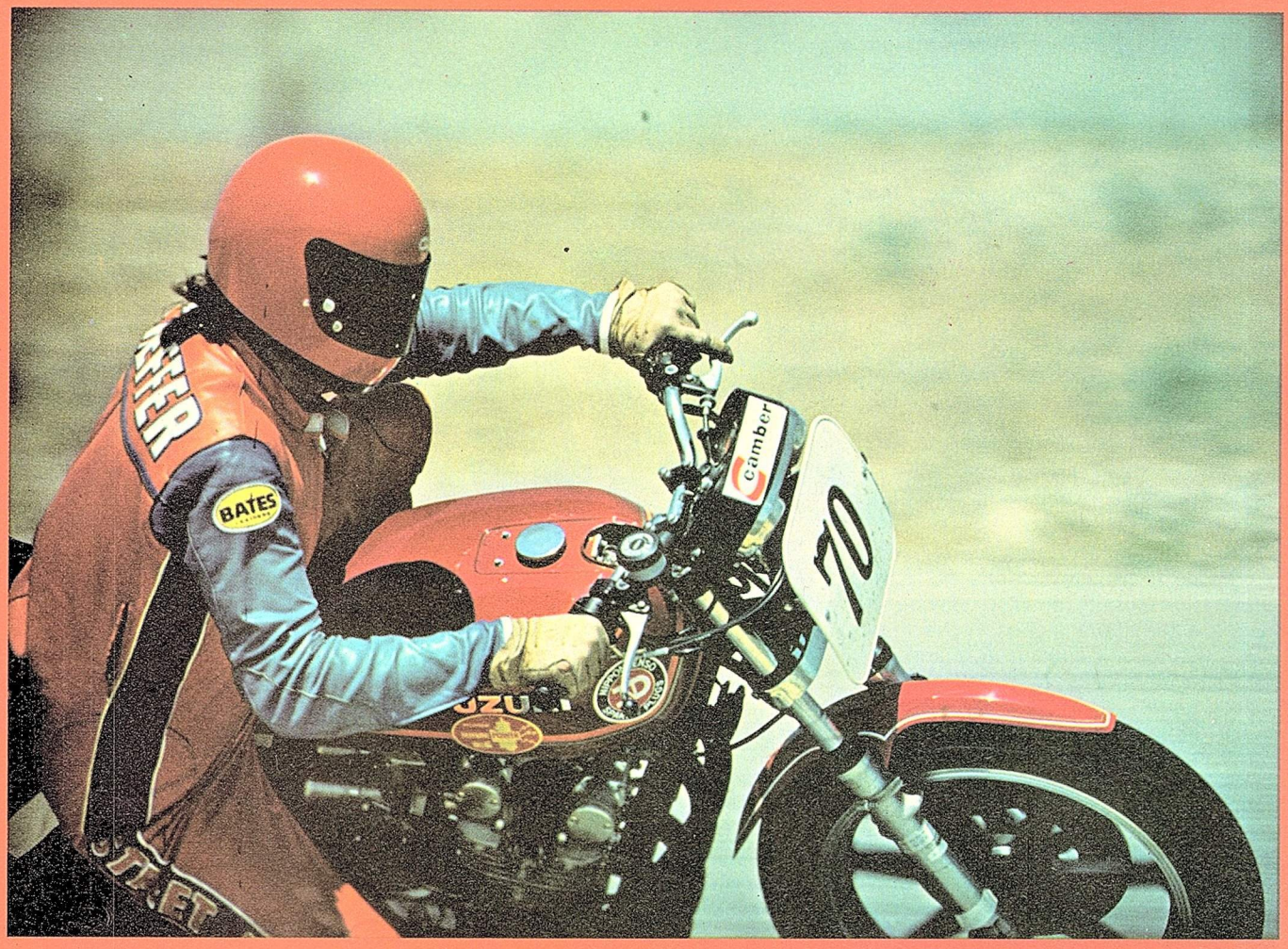
It's curious though, while busting through the whoops the bike doesn't complain. Oh yeah, the shocks were bottoming like crazy, but no feedback from the frame. No flex, no tank slapping, just bang, bang, banging along in a straight line screaming in fourth. (Fifth is just too high.)



Muffler was slightly in the way, brake pedal bent easily and often.

The MR's light weight makes it fun to throw around on the fireroads.

(Continued on page 70)



How to...
ABUSE A MOTORCYCLE

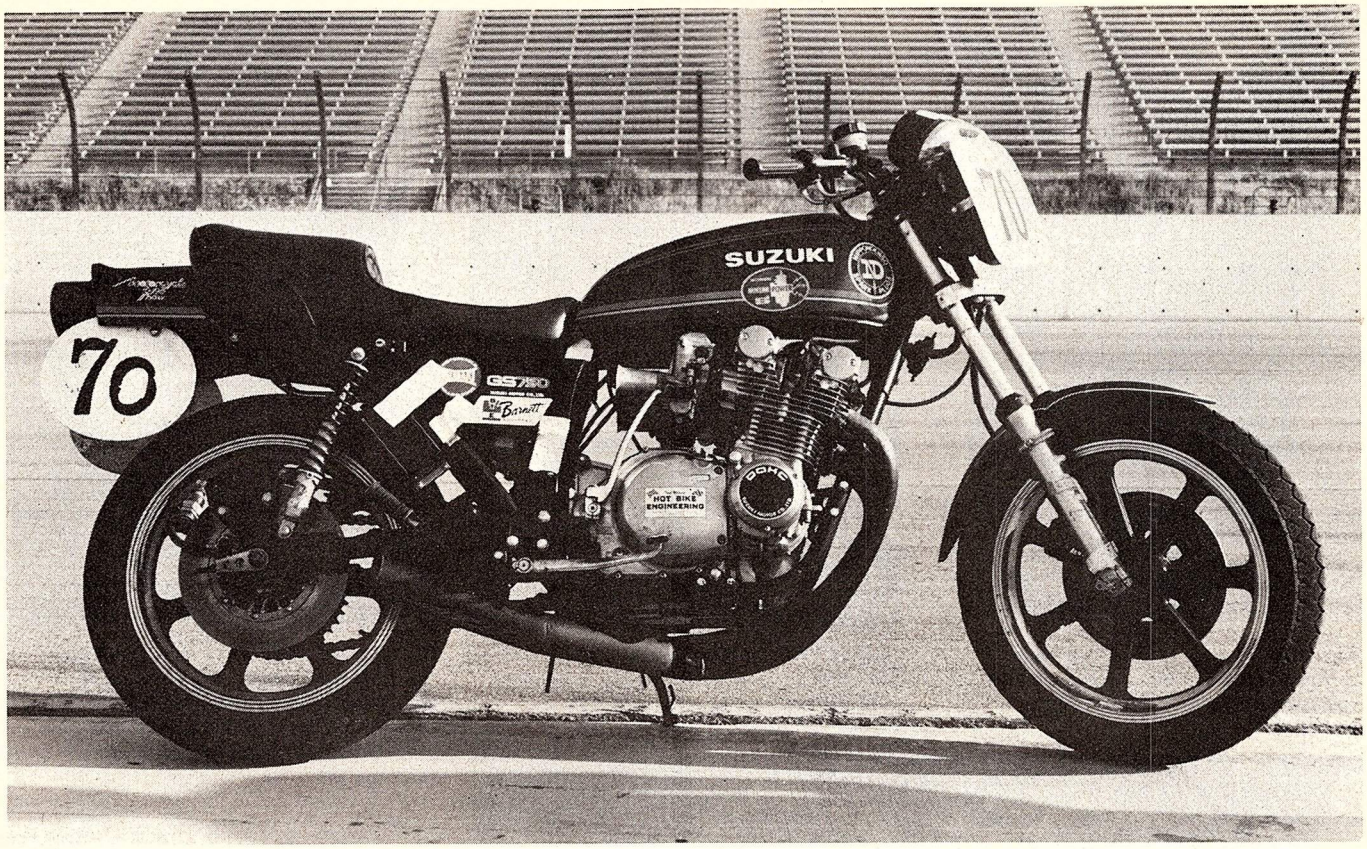
BY JEFF PECK
PHOTOS BY JEFF PECK AND LARRY GAYNOR

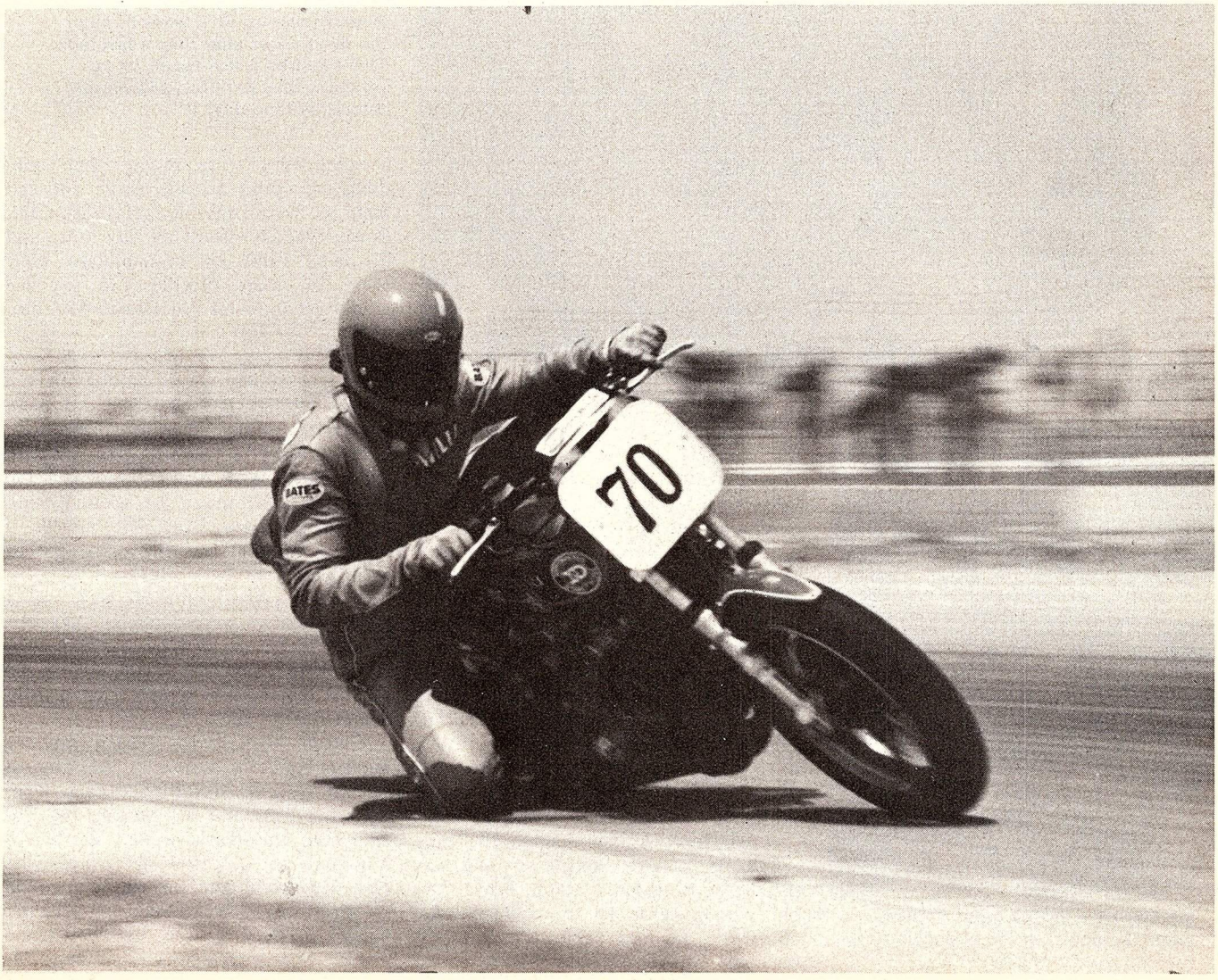
There are many obvious ways to abuse a motorcycle. You can leave the bike sitting in the path of an approaching army of lemmings as they destroy everything on their way to eventual destruction in the sea. Or you can always use the tried and true method of leaving your faithful mount parked next to a gypsy camp while you're having your fortune told. Both of these methods will result in the same thing, some sort of abuse or destruction to the bike. The last one, however, will most likely cost you your first born male child as well.

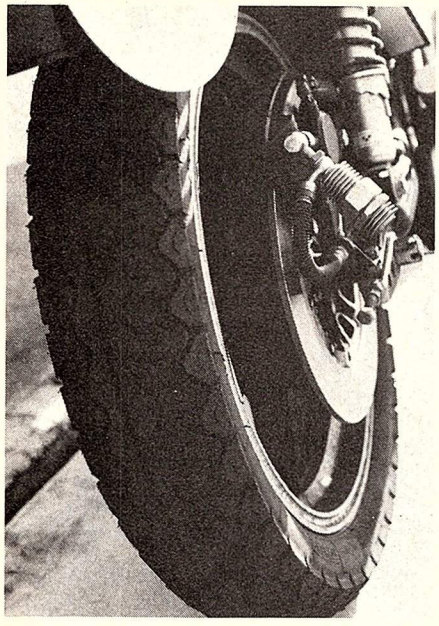
Number three on the list of ways to cause harm and destruction to a motorcycle is endurance racing. This is especially true if it happens to be 89.6 degrees in the shade. Your body may feel bad under those conditions, but your bike's motor is running at full throttle all the time, even when you're in the pits looking at all of the pretty girls with nothing on their bodies.

After closely studying all of the above mentioned possibilities we decided that running an endurance race sounded like the best choice, especially since we couldn't locate any lemmings running that weekend and there didn't happen to be any gypsies in the area. So there we sat with a Suzuki GS750 and the only thing left to do was race it.

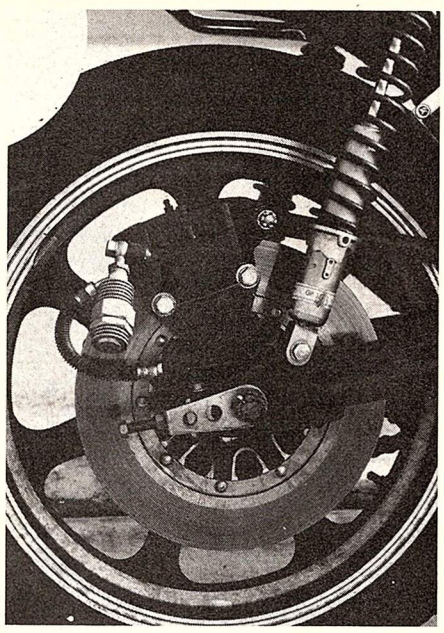
Before the date of the endurance race the Suzuki had been road raced in a total of 16 club races along with being ridden regularly on the street and more than a few trips to the local drag strip. Everything was functioning well, but for an event such as this one, preparation separates the finishers, and often the winners, from the dnf's and so we felt that more than just a change of oil was called for.


SUZUKI
70
GS750
HOT BIKE ENGINEERING

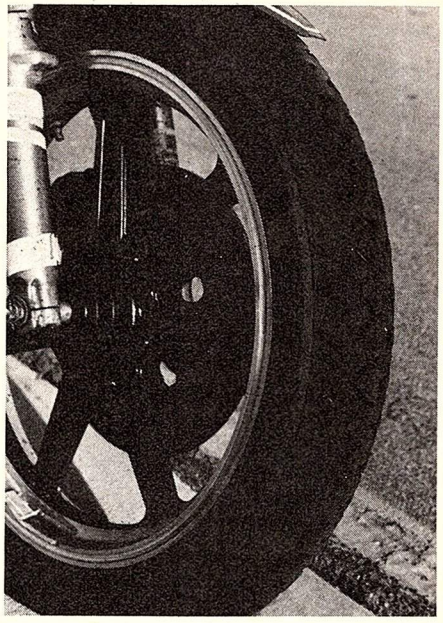

70
BATES



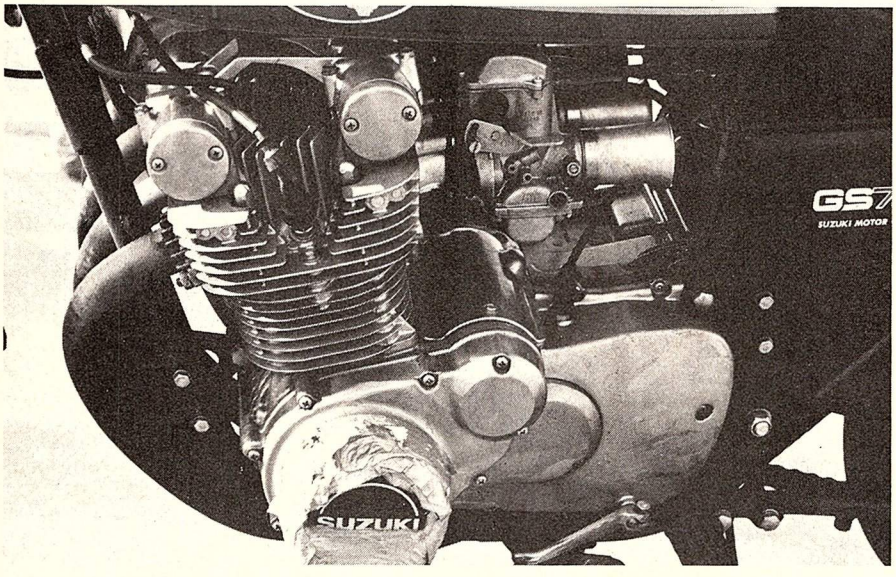
Pirelli MT18 mounted on the rear of the Suzuki went the distance and had more than enough rubber to continue.



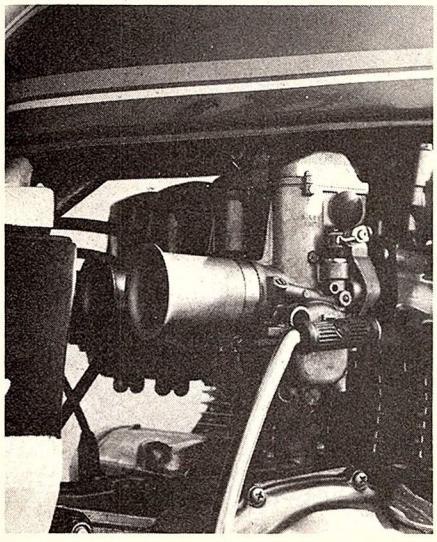
Number 1 Products handle the suspension chores in the rear and very well indeed, never fading at all during the entire race.



Up front a Pirelli MT11 did a very good job of helping steer the big Suzuki very precisely. Because of the number of right hand turns at Ontario that side of the tire showed more wear than the left.



Because of the super traction the Pirellis gave us, Willi wore through the dyno cover after only a few laps. This required a fast repair by our pit crew, they performed flawlessly throughout the day.



Smooth bore Mikuni carbs helped boost the power of the already strong running Suzuki engine.

For the intricacy of race preparation, the machine was turned over to Tech Editor Willi Scheffer. He tore into the bike and worked it over completely shimming the valves to within an inch of their little lives, checking compression ratios, clearances, bolts, nuts, washers, everything that might fall off, or for some reason give us problems along the way.

By the time race day rolled around the engine in the GS was purring along like it had just come from the factory and Mr. Scheffer pronounced it ready to race. As a matter of fact the engine didn't miss a beat through the entire six hours.

A product we feel helped the bike run as well as it did for so long was the Gerex Multifire ignition. More than one person came up to us during the course of the race asking if we might have an extra set of points for the brand of bike they were racing. The only thing we could do was smile and tell them we were running a Multifire CDI. Power was consistent all day long, and the bike fired up immediately after every pit stop. Needless to say we highly recommend the Gerex Multifire CDI.

Even though we didn't have any trouble with any pieces falling off the bike or things breaking, we did have one minor problem caused by something that was working too well. This problem arose when Willi decided he liked the Pirelli tires so much he ground right through the dyno cover. The only thing wrong with that was the oil leak that it caused.

It took a six-minute pit stop and a pit crew who were working like the Woods Bros. to get us back on the track. Our crew did such a fantastic job on the hole it didn't leak a drop for the rest of the day.

Getting back to the reason why we had all of this action is the pits, it started with the Pirelli tires that were mounted fore and aft on the big Suzuki. On the rear we had an MT18 mounted on a Lester three-inch-wide rim. Up front traction was controlled by an MT11 also mounted on a Lester Wheel. Both tires were eighteen's and

(Continued on page 69)

THERE'LL ALWAYS BE A HARLEY-DAVIDSON

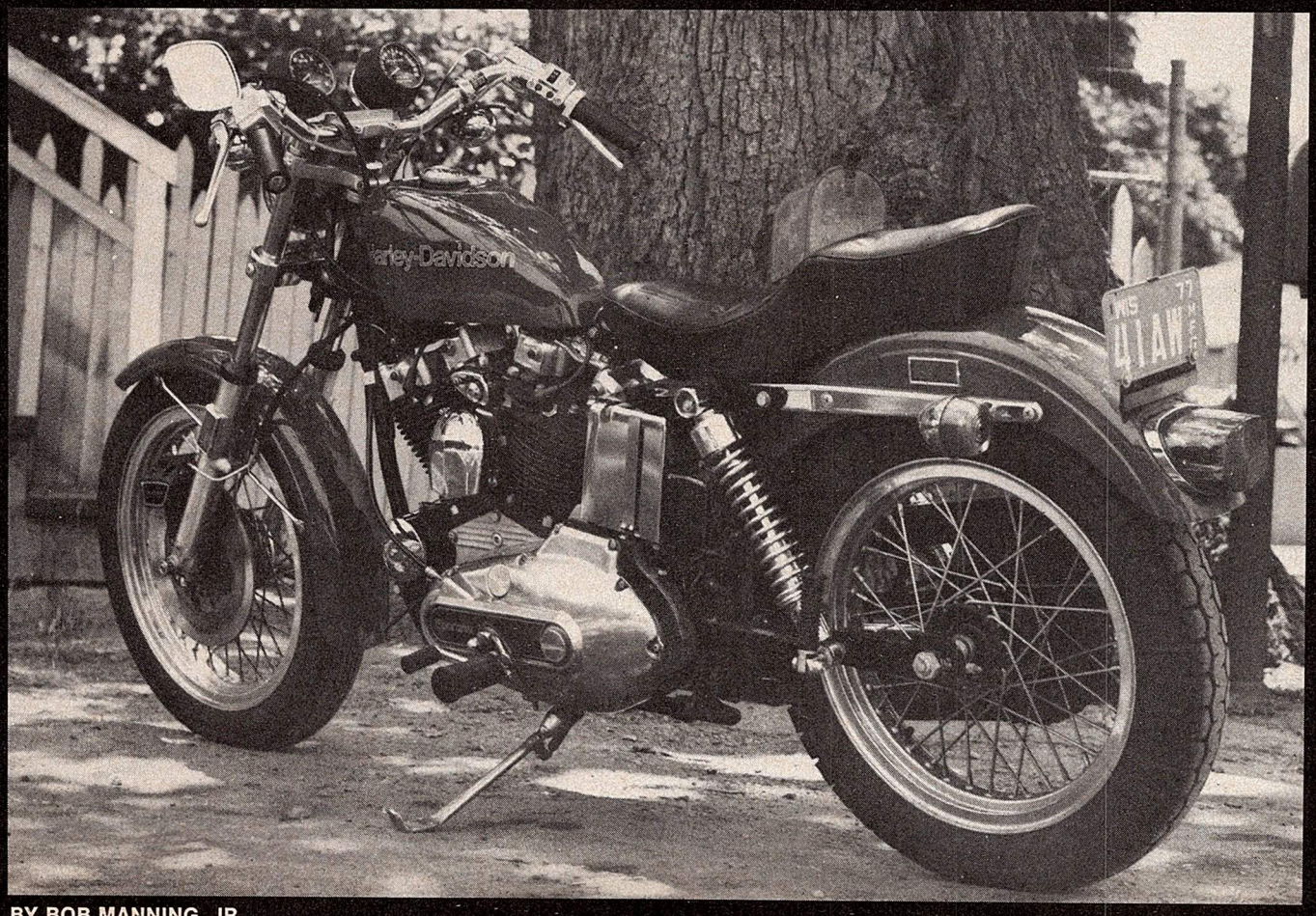
TAKING AN OUTSIDER'S VIEW AT THE SPORTSTER

Possibly the only way to approach a Sportster, or any Harley-Davidson for that matter, is with an open mind. The Sportster is not the type of machine that you can compare with anything else on the market. It doesn't fit into any of the big major categories, because those categories were established for the Japanese bikes to fall into and the Sportster is not like anything that has ever come out of Japan. The only way you could lay a label on the Sportster is to establish a class called cruiser.

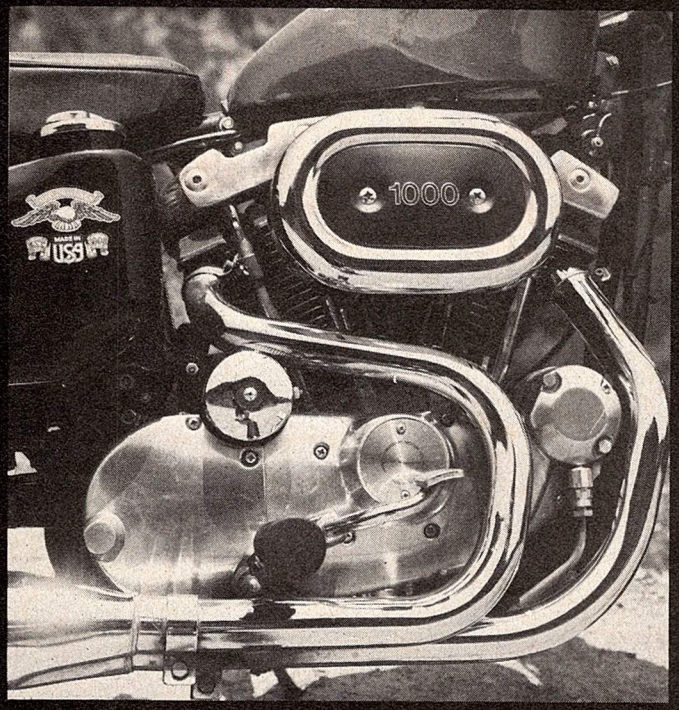
If there is one thing a Sporster does well it's cruising down the boulevard on a Wednesday, Friday or Saturday night. It's the type of machine that makes everybody's head turn because it's a Sporster. It attracts attention from girls because there is something very erotic about the sound of the Harley motor blup, blupping along.

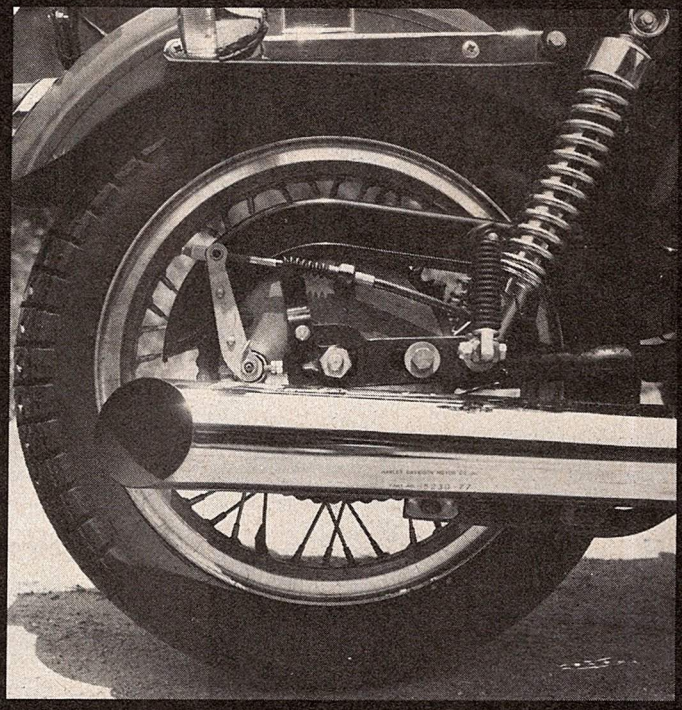
Guys will cast a glance your way because they're most likely envious of your machine and wish they had something with so much implied eroticism about it. Even the guys with bikes that would rip the Sportster apart in any sort of a drag race grab a glance. It's the machine, not because of how fast it goes, but because of what it is.

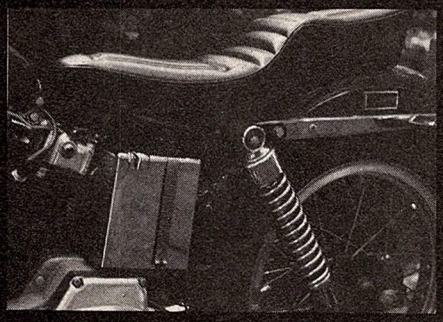
But what is it really? In the case of the Sportster it's an oversize engine crammed into a rather small frame. The gas tank looks like somebody forgot it

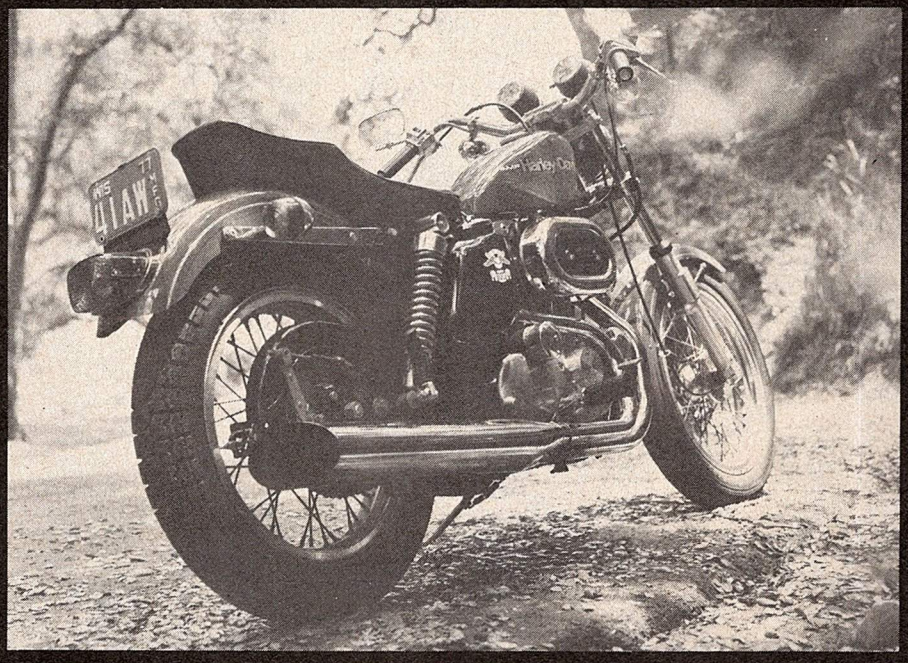


BY BOB MANNING, JR.









wasn't pre-shrunk and left it out in the rain. On any other bike it would look stupid if the frame was showing at both ends of a bright red gas tank, on the Sportster it looks right.

The seat is the same way. I never thought I could fit the large expanse of my butt on that small seat and be comfortable. I did and it was.

This seems to be the whole theme of the Sportster, if you approach the bike with the preconceived notion that you're not going to like it, all of the parts you're so sure of being wrong start looking like they might be right. After that point you're lost because soon you'll find yourself addicted to the Sportster. It is a series of incongruities which slowly work themselves into a pattern that make sense. It boggles the mind.

Even though the basic design of the Sportster goes back more than a few years, it too has been struck by the all powerful arm of the Federal government. In this particular case it was the exhaust system that seemed to be a Harley trademark for so long. It always seemed like you could hear a Sportster before you saw it.

Not any more. The new system on the Sportster is a two-into-one design that looks good, but has taken all of the bite out of the exhaust note. All that's left is a faint whisper of that throaty note as you pass down the road.

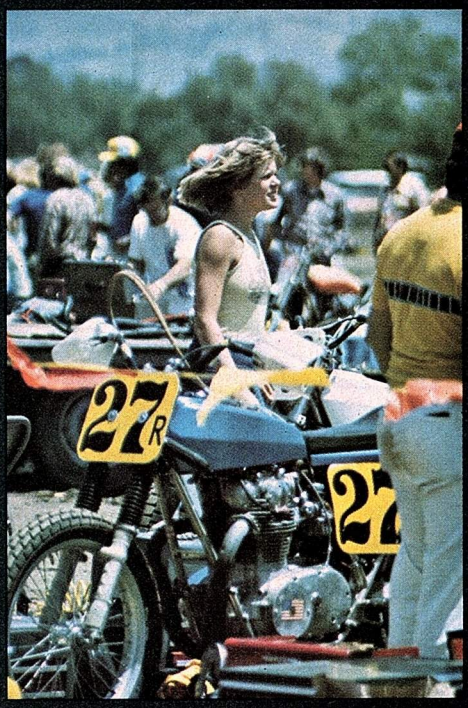
Another result of the new exhaust system is now you can hear all of the engine noise the Sportster has. There seem to be a million things whizzing around and clattering up against one another inside that motor. But it seems to fit the Sportster and so it works.

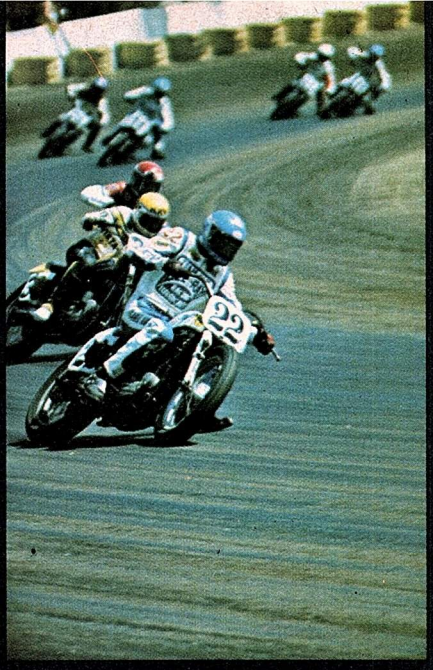
From the point of view of building the Sportster into a true high performance machine there are some engine builders who'll tell you the only way you are going to make a Sportster motor go fast is by cutting off the trans and running the engine on fuel. This is a little radical for the average street rider.

Most people, if they're interested in true high performance, are not going to look to the Sportster. If they want to build a really fast H-D they're going to buy a 74, or if they just want to build a fast machine they might just look to a Japanese product.

(Continued on page 66)

sport





OKLAHOMA CITY HALF MILE

Harley-Davidson orange and black team colors blanketed victory circle as Jay Springsteen won the AMA Mid-America Camel Pro Series National at the Oklahoma State Fairgrounds in Oklahoma City. Springsteen anchored a Team Harley sweep of the top three finish positions in the 20 lap event, followed by teammates Ted Boody and Corky Keener.

Ken Roberts, two-time AMA Camel Pro Series Champion and the 1977 point leader, finished fifth on his factory Yamaha behind the Harley team riders and Hank Scott of Findlay, Ohio, who rode a Shell Racing Specialty Yamaha. After six races in the series, Roberts saw his point lead dwindle to 12 points. He now has 61 points while Springsteen and Boody climbed into a tie for second with 49 points each.

Although race statistics suggest that Springsteen dominated the afternoon of racing, his 11th career national victory was far from easy for the 20-year-old dirt track wizard. He gained the pole position for the main event with a run-away win in the day's fastest heat race but was never able to slack off for a moment in the 14-man final event.

Steve Morehead of Findlay, Ohio, raced his K&K Insurance, KK Supply Harley to an early lead and maintained the point position until lap five, when he slid into the haybales on turn one, uninjured but out of the race. Sophomore Expert Terry Poovey, an 18-year-old from Garland, Texas, inherited the lead from Morehead but within two laps Keener had taken over while Springsteen and Boody were settled in third and fifth respectively.

Springsteen continued charging and passed Keener to lead at the race's midway point. Boody then came through traffic to take second from Keener four laps from the finish and set out in pursuit of Springsteen. A last-lap charge carried Boody to within one bike length of his teammate and the national win, but the defending Camel Pro Series Champion tenaciously held on for his second National win of the year.

The Harley-Davidson win at Oklahoma City throws the AMA Manufacturers' Championship into a deadlock. Both Harley and Yamaha have 73 points to date. Yamaha is seeking its fifth consecutive title. Harley last won the honor in 1972, despite the fact that Harley-mounted riders have claimed the last two Grand National crowns.

Gary Scott finished 9th and moved from 8th to 6th in the series standings.

1977 AMA CAMEL PRO SERIES POINT STANDINGS

Pos.	Name, Hometown	Points
1.	Ken Roberts, Modesto, CA	61
2.	Jay Springsteen, Lapeer, MI	49
2.	Ted Boody, Lansing, MI	49
4.	Steve Ecklund, San Jose, CA	44
5.	Corky Keener, Burton, MI	35
6.	Gary Scott, Springfield, OH	27
7.	Gene Romero, San Luis Obispo, CA	23
7.	Skip Aksland, Manteca, CA	23
9.	Steve Baker, Bellingham, WA	20
9.	John Hateley, Van Nuys, CA	20
9.	Alex Jorgensen, Stockton, CA	20
12.	Mike Kidd, Keller, TX	17
13.	Terry Poovey, Garland, TX	16
14.	Hank Scott, Findlay, OH	15
15.	Phil McDonald, Sapulpa, OK	14
16.	John Gennai, Los Gatos, CA	13
16.	Steve Morehead, Findlay, OH	13
16.	Randy Cleek, Shawnee, OK (deceased)	13
19.	Billy Oliver, Corvallis, OR	11
20.	Jim Allen, Racine, Quebec, Canada	10
20.	Chuck Palmgren, Santa Ana, CA	10

MANUFACTURER STANDINGS

Pos.	Manufacturer	Points
1.	Yamaha	73
1.	Harley-Davidson	73
3.	Kawasaki	24
3.	Norton-Triumph	24
5.	BSA	16
6.	Penton	13
7.	Bultaco	7
8.	Can-Am	3

RUSSIANS LEAD 250 GP

Gunnady Moisseev, the 1974 World 250cc Motocross Champion from the Soviet Union, is performing extremely well as the 1977 series passes the midway point. Seven of 12 Grands Prix have been held to date, the latest being on a muddy Russian track before 50 thousand spectators. Moisseev rode his KTM to his fourth overall win of the series and extended his series lead to 24 points over his teammate Vladimir Kavinov.

Marty Moates of San Diego, who is riding the 250cc World Championship Series for the Spanish Ossa factory, passed up the Russian event because of excessive red tape involved in getting himself and his machine in—and back out—of the USSR. Moates has finished as high as fifth in his first season in Europe but is not a contender for a top 10 series finish at this point.

1977 WORLD 250cc MOTOCROSS STANDINGS

Pos.	Name, Home	Points
1.	Gunnady Moisseev, Russia	141
2.	Vladimir Kavinov, Russia	117
3.	Harry Everts, Belgium	79
4.	Andre Malherbe, Belgium	65
5.	Jaroslav Falta, Czechoslovakia	58

SAN JOSE MILE

Gary Scott of Springfield, Ohio, the 1975 American Motorcyclist Association Camel Pro Series champion, turned in his finest performance of the 1977 season with a come-from-behind win on the mile dirt track at the Santa Clara County Fairgrounds in San Jose, California.

Scott, 25, had just one point to his credit prior to San Jose, the fifth of 28 races on the 1977 schedule. But he overcame a poor start in the 25-lap national final, and on lap 21 took the lead from Mike Kidd of Keller, Texas. Scott briefly gave way to hometown favorite Steve Eklund of San Jose, who led laps 22-24. But Scott dove beneath Eklund in turn one of the final lap, seized the lead and sprinted to the checkered flag with a five-length win over Eklund. Corky Keener of Burton, Michigan, finished third, while Kidd dropped out of the race on the final lap with a broken chain.

A great deal of pre-race attention was focused on current AMA Camel Pro Series point leader Ken Roberts of Modesto, California. Roberts, the lone Yamaha factory rider on the circuit, has made significant changes to his dirt track equipment and Yamaha held high hopes that he would be able to dent Harley-Davidson's recent dominance in AMA dirt track events. The San Jose outcome saw Roberts maintain his series lead despite failing to qualify for the national final, and the jury is still out on his equipment's capabilities.

Roberts was forced to ride his back-up machine after the number one mount developed engine problems in practice. He qualified poorly and, suffering from a severe case of the flu, pulled off the track midway through his heat race. Nevertheless, Roberts maintains a 14-point lead over sophomore Expert Eklund.

Roberts' nearest challenger going into San Jose, defending champion Jay Springsteen of Lapeer, Michigan, also ran into bad luck. The Harley-Davidson factory rider led his heat race for half-a-lap but then dropped out with engine problems. The departures of Roberts and Springsteen left the game of catch-up in the Camel Pro Series points race wide open and Scott was there to take full advantage of his opportunity.

Scott traveled to San Jose with just one point after four series races. His thrilling win was warmly received by a standing room only crowd of over 15,000 fans and also moved him into the series' top 10 for the first time in 1977. Moving past Springsteen into the second and third slots in the standings were Eklund and Ted Boody of Lansing, Michigan. Boody finished 4th at San Jose as Harley-Davidsons filled 15 of the 16 starting spots in the main event.

MIKOLA EXTENDS POINT LEAD

While two-time World Motocross Champion Heikki Mikkola of Finland has been establishing himself as the man to beat in the World 500cc Motocross Series, America's Brad Lackey has been enjoying one of his best seasons ever in Europe.

Mikkola, the bearded Finn who won the 1975 500cc World Championship and the 250cc crown last year, has won three consecutive Grands Prix, registering five moto wins and one second, since placing fourth in the series opener in Austria. In the latest 500cc GP, held near Helsinki, Finland, Mikkola delighted a partisan crowd with a sweep of both motos for a convincing overall win. That victory extended Mikkola's point lead over five-time 500cc World Champion Roger DeCoster of Belgium to 24 points after four of 12 races.

Meanwhile, 23-year-old Brad Lackey of Pinole, California, is finding his first season with Honda to be rather enjoyable. The 1972 AMA 500cc National Championship is currently a solid fourth in the world standings and is within 13 points of Gerrit Wolsink's third-place standing. DeCoster is five points ahead of Wolsink, his Suzuki teammate from Holland.

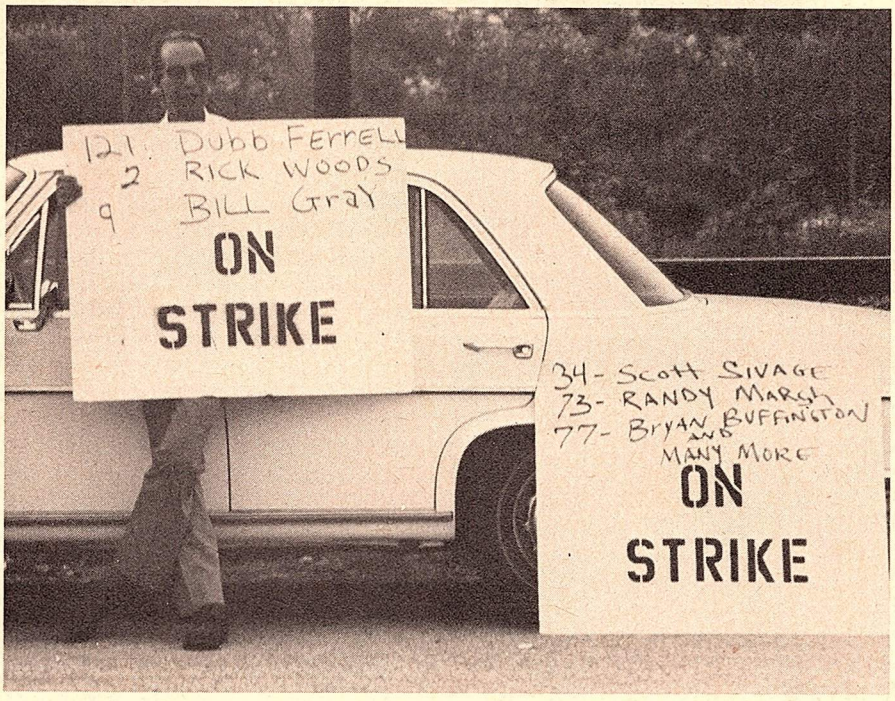
Lackey turned in his best effort of the year in Finland, placing third and second in the two 40-minute motos for second overall behind Mikkola. In eight point-paying motos to date, Lackey has been out of the top 10 just twice, once finishing 12th due to a bad start and failing to finish once due to mechanical gremlins. He has one moto win in 1977, along with two seconds, a fourth and a seventh.

1977 WORLD 500cc MOTOCROSS POINT STANDINGS

Pos.	Name, Home	Points
1.	Heikki Mikkola, Finland	103
2.	Roger DeCoster, Belgium	79
3.	Gerrit Wolsink, Holland	74
4.	Brad Lackey, Pinole, CA	61
5.	Graham Noyce, England	32
6.	Pierre Karsmakers, Mis. Viejo, CA	28
7.	Jaak Van Velthoven, Belgium	23
8.	Willy Bauer, West Germany	22
9.	Herbert Schmitz, West Germany	20
10.	Hakan Andersson, Sweden	18

NMA BEL-RAY GRAND NATIONAL SERIES LAS VEGAS, MAY 14-15

Dircks, Emerson and Heiser of the D-G Performance Team put their outfit in the spotlight at the first of the NMA Western Region contests. Gary Dircks, 16 of Phoenix captured 12-16 0-83cc stock expert class. Paul Emerson of Las Vegas won 12-16 0-83cc modified expert and third in minicycle stock. Other stand-outs at sandy new Williams Raceway were Scott Burnworth, 14, Jamul, California, capturing 12-16 105cc expert and third in modified experts; Jerry Bagby of Yuma, Arizona, who took 100cc stock experts and the new 250cc stock expert class; Lenny Geiger, 16 of Las Vegas, 125cc modified expert winner; George Holland, Kerman, Calif., winner 9-11 modified experts and 105cc; and Brandon Schneider, 8, Chino, Calif., who took 6-8 Jr. Cycle Modified and stock minicycle, and second in Jr. Cycle Stock.



A LOOK AT THE STRIKE PHENOMENON IN MOTORCYCLE RACING

As this is being written, the first long term strike involving motorcycle riders is in effect. Its outcome is not as important to us as a whole as it's elements for being and its effect upon those involved.

Speedway is one of the recent traditions of Southern California. It is a relatively small sub-world of the overall biking scene that makes up this motorcycling capital. Yet, it is one with a tradition of striving toward growth, reaching, at points, straining for survival. Always seeking to bring their sport to the levels of acceptance, both on an amateur and professional level, that are enjoyed by other forms of motorcycle racing.

It is a tradition to the many thousands of fans who turn out three of four nights every week to watch and root and scream for their individual favorite riders; Mike Bast, Sonny Nutter, Billy Gray, Bruce Penhall, Bobby Schwartz; riders who represent the upper echelon of speedway racers throughout the country. Riders who would enjoy nothing more than to see speedway expand into a true national sport, drawing many times the number of fans that it now enjoys.

Yet this year Southern California speedway has seen ripples appear on the smooth face of its consistent, almost habitual tradition. Ripples that have already grown to a degree of choppiness, and may yet become waves that wall forge change on the present speedway scene.

The speedway season, due to open in early April, was hindered and delayed several weeks before it saw its first night of racing. Even then spectators arriving at the Costa Mesa track, the site of the opener, were greeted by numerous people wielding signs and placards, handing out leaflets, and trying to persuade them not to patronize the races.

Adding validity and substance to these persuasions was the fact that many of these people were the very top name, Division 1 riders that they had come to see. They were riders on strike and protesting the monopolistic control, and, what they feel are, unfair practices by speedway promoter Harry Oxley.

Since that opening night through to the present time, the striking riders have migrated between the Costa Mesa, Irwindale, and Ventura tracks operated by Oxley, attempting to dissuade fans from entering and spending their money on what they feel is only half a show. Sometimes they succeed in turning a car around, winning the would-be spectator over to their side; perhaps even convincing him to park his car and pick up a sign himself. But as would be expected, many of the leaflets calling attention to the riders' plight, are found merely scattered about in the track's parking lot. But the effort goes on. And the main impact of it may well be quite invisible from the track-side view.

The rider strike has been organized and supported by the Speedway Racing Association, which was founded to represent and serve all speedway riders. A rider union of sorts. It is this representation and service for the riders that they are now attempting to put in active use, to bring about a more productive and satisfying situation for the riders.

Their signs and placards call attention to their major concerns: Though the overall cost of participating in speedway has increased per individual, the rider's purse, consisting of a percentage of the gate intake, has not increased in over three years. The S.R.A., confident that profits are abundant enough to warrant it, have asked for an increase of 10 percent of the gate. This would bring the purse up to 40 percent instead of the present 30 percent which the riders originally agreed to several years before in an effort to give the rebirth of speedway in So. Cal. a healthier start.

In addition, the S.R.A. asks for a return to their former $75 a week disability insurance plan, which had this year been cut to $25 a week. They ask for a rotational system to be instituted for the picking of each night's Division 2 & 3 racers, instead of the "arbitrary, favoritism-oriented" system that is in present effect. Also they demand an accurate and open system of checking the gate figures for each night's event, presently, they claim, denied them.

A look into promoter Harry Oxley's views immediately gives vivid testimony to the reason for the length of the strike and the inability for it to gain resolution. Profits, he says, are not as large of the S.R.A. claims and certainly not large enough to withstand a 10 percent gate increase for the rider's purse, without substantially raising the cost of tickets. What the S.R.A. asks then, according to Oxley, is out of the question.

In addition, a talk with Oxley's Operations Manager, Tim Fisher, brings to light that there is already a rotation system in effect for Division 2 and 3 riders, with rare exceptions being made for popular crowd requests.

On the S.R.A.'s point of accurate gate checking, Tim says that the gates are controlled by an independent ticketing firm, known as Tops for Crowd Control, which operates independently of Oxley, and provides nightly tally sheets for tickets sold.

That both sides' claims are in complete contradiction with each other is the foundation upon which the present deadlock is based.

With the purse money being the major issue, all could be solved by an independent qualified third party examining Oxley's record books. But even this act has been complicated. Oxley says that at a pre-season meeting with the S.R.A. he had already offered his books for full examination to them, and was met only with a reply accusing him of keeping two sets. S.R.A. Vice-President Louie Kossuth admantly denies that Oxley ever offered them his books, except at a meeting with specially chosen riders, at which he merely read

aloud a partial segment of them.

Asked if he would *now* let an uninvolved party examine the books, Harry Oxley stated that he has no further interest in the strikers and will not go out of his way to appease them in any form.

Estimates even to the crowd effect of the rider strike, are also largely contradictory. Fisher assures us that crowds in all three tracks are on a par with last year's statistics, while Kossuth gives car counts of a figure far below the claimed attendance in two of the three tracks.

But *Modern Cycle* isn't particularly interested in taking sides, or of passing judgment on this deadlocked situation. Of more interest is a look at the overall strike phenomenon. Exploring the inner grey region between the extremes of opposition. Looking at the people caught in the middle, and the more universal effects represented in this strike situation.

For instance, how are riders affected by a strike? The speedway strike is being instituted for the benefit of all the riders, yet for many it is by no means a clear cut decision as to whether to join it or ride. As a direct result of this, the names listed as striking riders has fluctuated and varied throughout the effort. Every rider, particularly in Division 1, would like to see a higher purse instituted, but many are not able to give their full support to the strike movement.

This is because sponsors and contracts enter predominantly into the picture. Several riders who have tried to withdraw from the racing, have only met with pressure brought upon them by their sponsors. No racing, for whatever reason, means no exposure, and many sponsors are not sympathetic toward the individual rider's plight when it means their product is not getting the attention they want.

Thus, when confronted with their reasons for continuing to race despite the coaxing of their fellow S.R.A. members, a typical rider response is not an adament denounciation of the strike, but a resigned almost apologetic shrugging of the shoulders, "I gotta race. I'm caught in the middle."

Despite sponsors being a big factor in weakening the strike force, the very combined pro-amateur nature of speedway also plays a major part. Oxley's reaction to many of the top name riders sitting out the events had been to merely fill their places with lower caliber riders. This simple move, necessary to his show, and powerful in its political effect, almost completely removes strike support from the lesser division riders. Riders who otherwise would be waiting in anticipation to be chosen to race, or sitting out altogether, now leap at the new opportunity to race regularly, and perhaps even win crowd support in the absence of the regular stars. The purse means nothing. The chance to race and maybe do better than normal is the attraction.

This obviously wouldn't work in an all pro event, because the crowd would not settle for second-string riders if they had paid to see the "names." But perhaps this also points then to the unique nature of the speedway attraction and yet another source of dissention.

We talked to a couple, avid speedway fans, who had taken it upon themselves to join the strikers. They come out, with their son and daughter, to tote their own signs before each event. Their issue is both larger and more fundamental than the rider's purse percentage. It deals with, what they feel, is the raw deal fans get from such a situation, and the "show" element that speedway racing is becoming saturated with.

The "show" view is not a new one. It's been brought up quite often in reference to stadium motocross racing. The feeling that the real racing fan had been sold out to the dollar. Yet in speedway, it being a several times a week event, the effect, especially due to the strike, is more pronounced.

A couple years ago, they say, they and many of their friends came out to every speedway race, and enjoyed the all-out racing among the top riders. They appreciated a good effort and fine moves. But over the past couple years, their friends have, one by one, stopped coming. This, they believe, is due to an element of showmanship and hype that had creeped in to dilute the racing.

This, they say, is apparent more so now than ever. With the absence of many top riders and the subsequent slot-filling of lesser riders, the racing had taken on a "demolition derby" element. More crashing, more "thrills," but less good racing. A spectacular, yet watered down version of what they were used to. The fans, they feel, are the innocent victims of the stalemate, being handed a sub-par show that shows no hopes of improvement.

If this is indeed so, and many of the "real" racing fans have dropped out, who, then, is supporting the present racing? Not all the crowd, but a large percentage, for sure, is there purely for the entertainment value, and/or because it is the place to be. A cruising scene. Whether all the top riders are present or not doesn't necessarily matter. They have got Bast and Penhall and a couple other superstars to yell for, and any excess in crashing, in "thrills," is all the more action to be eaten up. Besides, flamboyant announcer Larry Huffman is attuned to building stars, and is already "creating" new ones to root for. Asking several random crowd members about their feelings on the rider strike and lack of top riders yielded a highly apathetic response. A concern only with being entertained by the "show."

They cannot be faulted with their opinion, and neither can the Oxley camp who have admitted to directing the racing in this direction to some degree. Their business, after all, lies in pleasing the largest number of spectators, for whatever reason they watch.

The question inevitably crops up. Can a strike be effectively pulled off? Strikes have been successfully used in one-event situations, on a professional level. Situations where a promoter depended upon certain riders being present to please the crowd. Where substitution would not be an effective measure.

But in amateur level events, which the present speedway races are, in many ways, akin, the chances of a successful strike are greatly reduced by the elements we've mentioned. There are too many hungry riders waiting for their chance to win, if not merely race. Too willing to forego concern over rewards for the mere opportunity. There are sponsors who want their exposure, and fans who want action more than the best overall racing available.

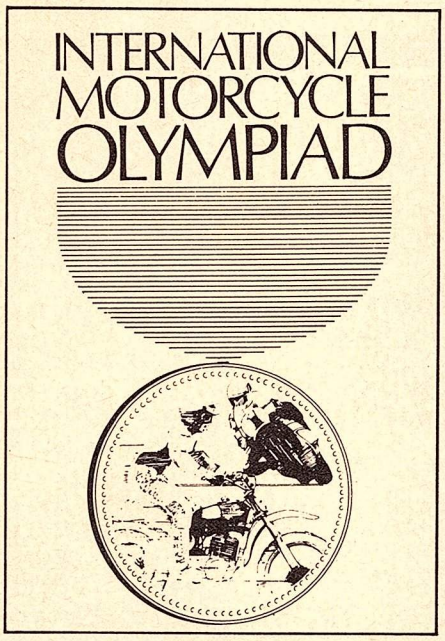
By and large, however, the main deterrent to a successful strike, and an unproductive scene all around, is a promoter monoply. It has existed so far this season in speedway since Oxley's rivals dropped out after last year. Riders must and will race. If they can only do it for one promoter, they will do it for that promoter. In such a situation, fans, too, have only the simple choice as to whether to go or not go. Most fans will settle for inferior racing rather than none.

That is the real key to both the plights of the unsatisfied riders and fans in any similar situation. Support to a competitive effort on the part of another promoter, something that the S.R.A. realizes and a direction that is already opening up its possibilities as regards this specific situation.

Many eyes have turned in the direction of the speedway sub-world as an effect of this strike, and they are watching with interest its progress. As the first long-term strike involving motorcycle racers, its outcome may have ramifications extending into other areas of racing.

But perhaps the biggest lesson that can be drawn from it are not connected with speedway at all, but in how we interpret and learn, and apply them to our own individual situations, and in how they help us to understand our own sports a little better. After all, sports are a business, whether we like to think of them in those terms or not; and all of us, participants, promoters, and fans, are a part of the cause and effect of it's policies.

* * *



MONROE-S&W INTERNATIONAL MOTORCYCLE OLYMPIAD

Try to imagine taking some of the best riders in the world, from all forms of motorcycle competition, and running them through a decathlon type event to see who's the best all-around motorcyclist!

Add to this challenge, the stipulation that they ride all of the events on the same motorcycle. What kind of bike is suited for a Scottish trials? Drag race? TT scrambles? Road race? Motocross? Hill climb? Short track?

It would not only determine the versatility of the rider but the flexibility of the bike, too.

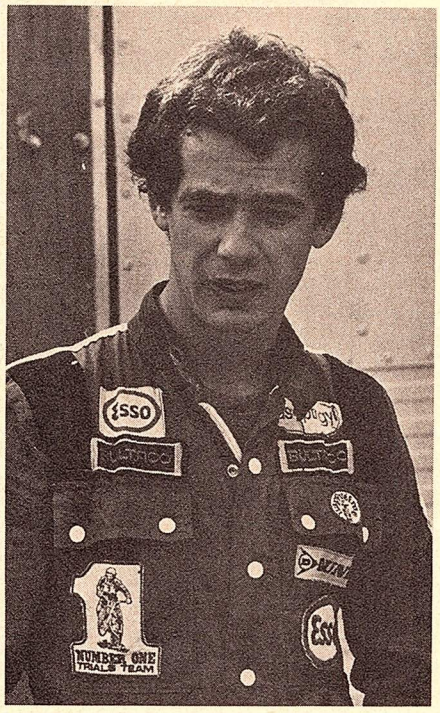
Can it be done? Monroe/S&W and Vic Wilson Ent. feel that it can and have guaranteed $10,000 to the winner with 15 Gs to the rest of the field.

The event will be held over a three-day period, September 16-18 at various tracks. The first day's event, the short track, will take place at the Orange County Fairgrounds. Day two will feature the drag and road races at Orange County International Raceway. The hill climb, trials, TT scrambles and motocross events will follow on day three at Saddleback Park.

The only changes allowed on the one bike will be gearing, tires, and jets. The switch must be made by the rider himself during a 15-minute period just prior to each event.

Invited to attend are many of the top riders in the world who were selected by a special poll taken in Cycle News. The list of heavies includes Roger DeCoster, Mike Bast, Jim Weinert, Malcolm Smith, Mike Hannon and Larry Roesler.

The big question is, what will Roger D. ride? A long-travel, factory trials bike with a fairing and drag bars?



FRENCHMAN COUTARD WINS CYCLE NEWS/ WAGNER CUP WORLD TRIAL

Bultaco-mounted Charles Coutard of France earned a comfortable victory in the seventh event of the 1977 World Observed Trials Championship Series, the Cycle News/Wagner Cup Trial held at Jeddo, Michigan.

Coutard completed the two 20-mile loops, each with 25 observed sections, having lost just 22 points and an additional 1.2-point time penalty. Coutard had been tied with American champion Marland Whaley of Santee, Calif., after the first loop, but Whaley ran into difficulties the second time around. Both Coutard and Whaley dropped nine marks on the first loop, the best scores of the day. But while Coutard dropped 13 points the second time around, Whaley lost 20 and picked up 2.6 time penalty points, still good enough to gain the runner-up spot for the Honda rider.

One very costly miscue cost Whaley five points on the second loop as he entered a section, decided he was not on the best line, turned and prepared to start over. However, his front wheel had entered the section and, according to international rules, he was assessed five points for a failed attempt.

Mike Griffitts added to a successful day for American riders by finishing third on a Montesa. The Granada Hills, California, competitor ended the day with a total score of 33.9 compared to 31.6 for Whaley and 23.2 for Coutard.

In all, five Americans placed in the top 10. Joining Whaley and Griffitts were Hark Eggar of San Diego in fifth; Don Sweet of Eagle Bridge, New York in sixth; and Lane Leavitt of Rescue, California, in seventh.

Placing a disappointed twelfth was Bernie Schreiber of LaCrescenta, Calif., the only American who has competed regularly in the World Observed Trials Series in 1977. Schreiber failed to earn world points and slipped from fifth to sixth in the standings.

WORLD OBSERVED TRIALS CHAMPIONSHIP SERIES STANDINGS

Pos.	Name, Home	Points
1.	Malcolm Rathmell, Great Britain	59
2.	Martin Lampkin, Great Britain	58
3.	Yrjo Vesterinen, Finland	55
4.	Ulf Karlson, Sweden	52
5.	Charles Coutard, France	36
6.	Bernie Schreiber, La Crescenta, CA	34
7.	Rob Shepherd, Great Britain	26
8.	Manuel Soler, Spain	23
9.	J. Reynolds, Great Britain	20
10.	Nigel Birkett, Great Britain	19

AMA/NATC NATIONAL OBSERVED TRIALS SERIES STANDINGS

Pos.	Name, Home	Points
1.	Marland Whaley, Santee, CA	30
2.	Lane Leavitt, Rescue, CA	26
3.	Don Sweet, Eagle Bridge, NY	24
4.	Bernie Schreiber, La Crescenta, CA	20
5.	Tom McKinney, Cresco, PA	19
6.	Mike Griffitts, Granada Hills, CA	17
7.	Bill Burgener, Boulder, CO	14
8.	Curt Comer, Jr., Cooksville, TN	13
9.	Greg Ruoff, Tulsa, OK	10
10.	Jeff Fish, San Diego, CA	6

1977 MID-SEASON RACE PROGRAM—DISTRICT POINTS LEADERS (WANTED)

We have observed new fast and promising MX riders during the first 5 months of the 1977 racing season. MAICO offers a semi-sponsorship to riders who worked their way into the top 10 of their area.

We will have available for the fastest Amateur or Expert riders in your area:

AW 250 Moto-Cross at $503.00 off list price

AW 400 Moto-Cross at $539.50 off list price

AW 450 Moto-Cross at $544.50 off list price

(When sending in resume, please indicate which model rider is interested in.)

Interested Dealers: Start talking to the best riders in your district to get him on "TEAM MAICO". Send 1977 racing resume and district standings of rider, to the attention of T. S. Steele.

Machines will be allocated starting June 8, 1977 to the most promising amateurs and/or experts whose resume's are received.

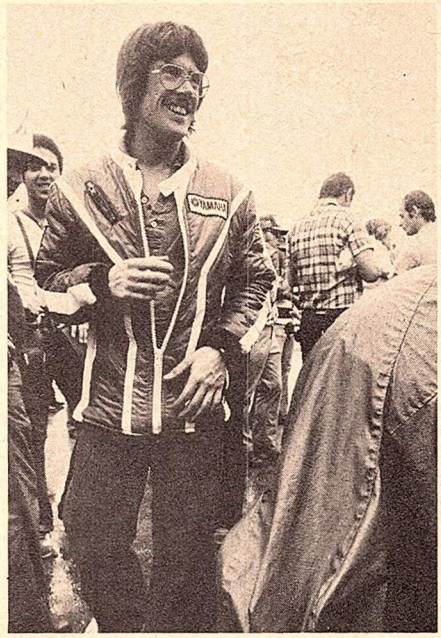
We reserve the right to select riders at our own discretion.

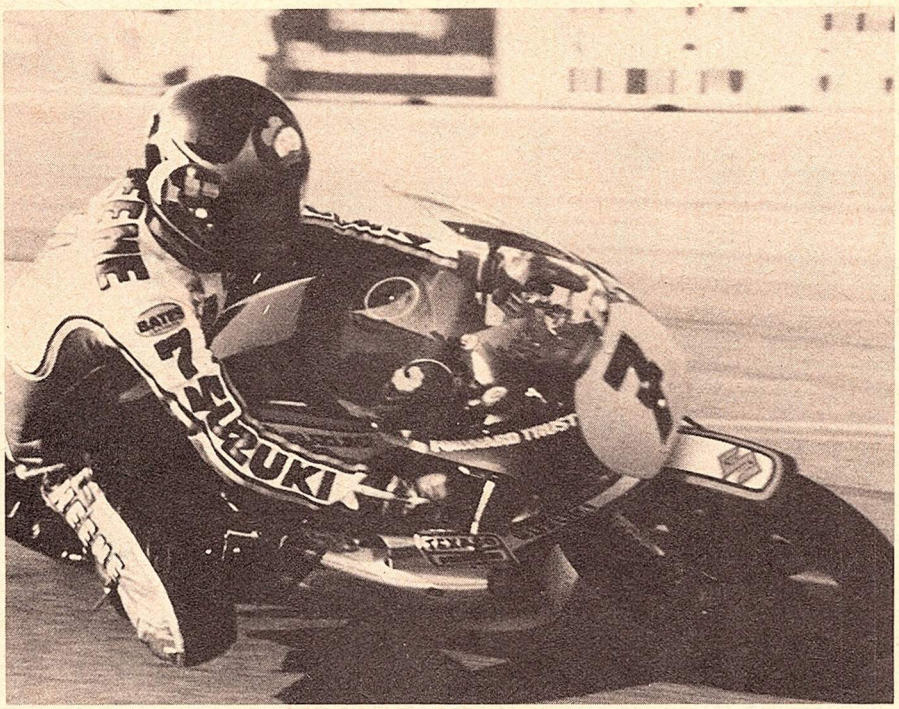
AGV SERIES WORTH $12,500 TO CHAMPION BAKER

The AGV Helmet World Cup Trophy Series, which included three major Formula 750 Road Races, was dominated by American riders Steve Baker of Bellingham, Washington, and Kenny Roberts of Modesto, California. Baker ended up tied with Roberts at the conclusion of the series with 345 points. However, Baker was awarded the win based on two wins compared to one for Roberts. In all, Baker collected $12,500 in point fund awards. Roberts picked up $8,500 from the European helmet manufacturer.

The three races included in the series were the Daytona 200 and Paul Ricard (France) 200, both won by Baker, and the Imola (Italy) 200, won by Roberts. Philippe Coulon of France was third in the series with 111 points, followed by Giacomo Agostini of Italy with 110 and Takazumi Katayama of Japan, also with 110. Rounding out the top 10 were Boet van Dulmen of Holland, Christian Sarron of France, Gregg Hansford of Australia, Christian Estrosi of France and Warren Willing of Australia.

Plans are underway for continuation of the AGV Helmets Trophy Series during the 1978 season. Once again, the Daytona 200 is expected to open the series.





HOCKENHEIM, W. GERMANY

Team Suzuki's Barry Sheene — the reigning World 500cc Road Race Champion—took another step towards defending his title by winning the West German Grand Prix. Sheene, racing for Suzuki of Great Britain aboard the works Suzuki RG 500, began the season with a win in Venezuela but then refused to ride at the Austrian round because he considered the track conditions unsafe for competition. Most other World class riders joined Sheene at the boycott in Austria but the FIM conducted the race despite their protests and Jack Findlay piloted a privateer RG 500 to the Winners Circle at that event. Sheene's Suzuki Teammate Pat Hennen of San Mateo, California, took second in West Germany, with Steve Baker of Bellingham, Washington, placing third. With eight GP's remaining on this year's schedule, Sheene tops the leader board with 30 points, followed by Hennen and Baker in a tie for second place with 22 points each.

PENTON RIDERS DOMINATE MICHIGAN RELIABILITY TRIAL

Penton-mounted riders swept four of five classes in the May 21-22 round of the 1977 U.S. Reliability Trials Series at Rose City, Michigan. Breaking the Penton streak was Drew Smith of Stanhope, New Jersey, who edged Penton's Dane Leimbach of Lorain, Ohio, for overall honors in the 175cc class. The Penton class winners were Ted Leimbach of Lorain, Ohio, 125cc class; Jack Penton of Lorain, Ohio, 250cc class; Gary Younkins of Hubbard, Ohio, 350-cc class; and Frank Gallo of Lisbon, Ohio, 500cc class.

The 1977 U.S. Reliability Trials Championship Series includes seven events. Each rider's best four scores in class will be counted toward national championship honors. For riders seeking a spot on the American International Six Days Trial Team, the series carries double importance since performances in the series will be considered heavily in the selection of the U.S. squad. The ISDT will be held in Czechoslovakia.

Following are class leaders in the series:

1977 U.S. RELIABILITY TRIALS NATIONAL CHAMPIONSHIP SERIES STANDINGS

125cc Class

Pos.	Name, Home	Points
1.	Mike Rosso, McKeesport, PA	46
2.	Dwight Rudder, Madison, MS	43
3.	Bob Pearce, West Seneca, NY	34
4.	Tom Penton, Lorain, OH	31
5.	Joe Klokkevold, Spokane, WA	27

175cc Class

1.	Drew Smith, Stanhope, NJ	46
2.	Don Cichocki, Bethpage, NY	38
2.	Mike Deyo, Orofino, ID	38
4.	Dane Leimbach, Lorain, OH	36
5.	Rod Bush, Parkersburg, WV	33

250cc Class

1.	Jack Penton, Lorain, OH	60
2.	Eric Jensen, Los Angeles, CA	32
3.	Bruce Kenny, Great Meadows, NJ	29
4.	Frank Piasecki, Toledo, OH	28
5.	Mark Deyo, Orofino, ID	25

350cc Class

1.	Mike Hannon, Silverado, CA	56
1.	Gary Younkins, Hubbard, OH	56
3.	John Wheeler, Delmar, NY	39
4.	Jeff Hammond, Orinda, CA	31
5.	Dave Mungenast, St. Louis, MO	27

500cc Class

1.	Kevin Lavoie, Chepachet, RI	42
2.	Dick Burleson, Antioch, TN	36
3.	Al Baker, Van Nuys, CA	31
4.	John Fero, Orange, CA	30
4.	Nate Pillsbury, Ft. Hood, TX	30

Safety Braker M

BY WILLI SCHEFFER
PHOTOS BY WILLI SCHEFFER

Without a doubt, there are product evaluations that have been glossed over to eliminate the small, minor problems that happen during testing.

Problems like spray cans that spurt instead of spray, or an accessory part that has to be exchanged to the manufacturer for one that works properly.

Well, this evaluation test will not have any problems, small or big, eliminated or covered over, because this product deals with something far too important, the motorcycles hydraulic braking system.

There are some products that are so new that it's an honor to be one of the first to test or try out these inventions.

Safety Braker is a device that was originally invented by Robert Booth, an engineer and auto racer. Mr. Booth's units are used by champion racer Nike Lauda on his FL Ferrari and Bob Bondurant at his race drivers school.

A new model has been developed by the same inventor and manufactured exclusively for motorcycles. It is called the Safety Braker M/C.

Hard braking by either front or rear wheel will lock up that wheel quickly and cause you to bail. It is true that quick thinking and fast reflexes can get you out of the skid by telling you to back off.

The Safety Braker eliminates premature wheel lock by cushioning the brake fluid. A rubber plunger-type device is surrounded by two machined halfs that are screwed together. Cooling fins incorporated into the unit act as a heat sink to lower the temperature of the brake fluid.

My first attempt was to use the Safety Braker on a race bike. Though the Safety Braker M/C is not advertised as a racing part, I thought that testing of the braker at high speeds would show its worth.

Since high speed is the name of the game, you would think the Safety Braker would be the answer to motorcycle road racing.

That first attempt to see how the Safety Braker would work ended in failure. After noticing an oily base sweeping around the front of the gas tank, retiring to the pits quickly entered my mind. Let me explain first that the Safety Braker has two ways of incorporating the unit to the brake lines.

The T-type fitting can be placed somewhere safe and practical on the steel brake line, while an aluminum type fitting will mate side by side with either brake hose's banjo fittings.

I received a Safety Braker with an aluminum banjo fitting.

Well, you can imagine the feeling when I rolled into the pits to check that oil leak on the gas tank. The aluminum banjo fitting could not support the Safety Braker under rigorous conditions. The aluminum shaft cracked in half and literally fell into my hand.

A word of warning to anyone with a Safety Braker with an aluminum banjo fitting: Do not use the aluminum banjo fitting for racing purposes.

Luck saved me from a serious mishap. So please, my point is to get you to learn from my experience and request the steel banjo fitting for rougher usages. This will be supplied by the Safety Braker Co.

When the steel type banjo fitting arrived, I was anxious to finally go out on the track and out-brake the competition.

As soon as the last air bubble was exiting the brake line horse, I fired up the bike and out on the street I went to make sure any leaks were to be repaired now and not in the pits.

I am informing you that it was very hard to lock up the front wheel. It works! With the steel fitting, the Safety Braker is ready for the race track. Now for the real test.

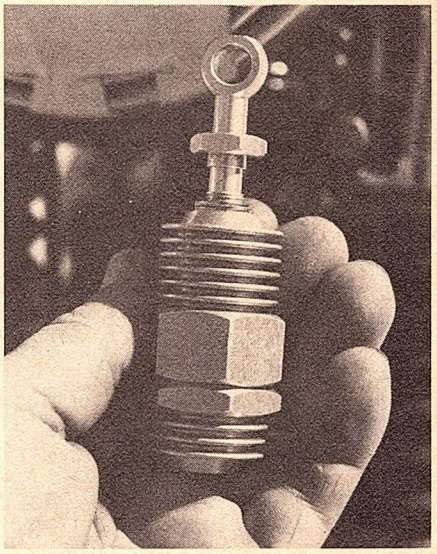
We are on the pre grid and the green flag drops. Everyone gets a good start. We funnel into turn one, then single file through turns two and three. Shift down one gear for turns four and five, and now the brake markers are in sight before turn six.

A big Z-1 grabs for the binders just before the first brake marker. I figure I can get around him if I brake somewhere in between the one or two markers.

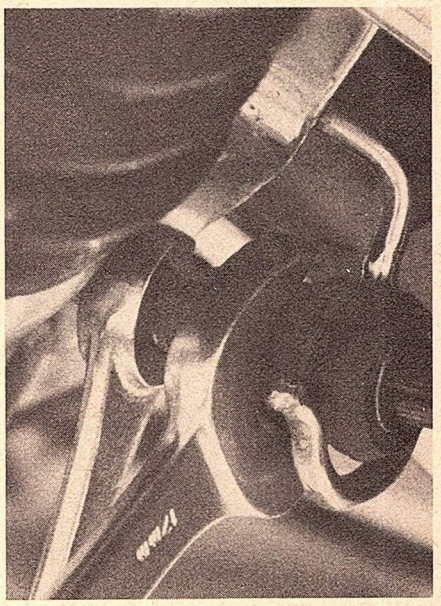
I grab a handful of front brake. I'm braking, but not slowing down fast enough. I tighten down on the brake lever more and I'm already pitched over going around the corner. The brakes did not lock up around that corner. A plus for Safety Braker.

The days of testing of the Safety Braker M/C for racing purposes concluded that the unit is not recommended for racing conditions for the front brake.

The braking involved during racing requires the front brakes full potential to stop you. If the front wheel locks

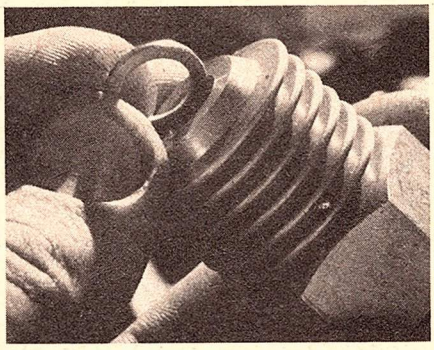


The Safety Braker M/C does not contain a spring or anything similar. It is a sophisticated damping device that eliminates the mechanical inequities found in hydraulic systems. It contains specific amounts of damping fluid and air with a precisely controlled diaphragm resiliency. If you press down on the piston, you will find only a small amount of movement. Safety Braker M/C does not interfere with the hydraulic volume and is completely fail safe.



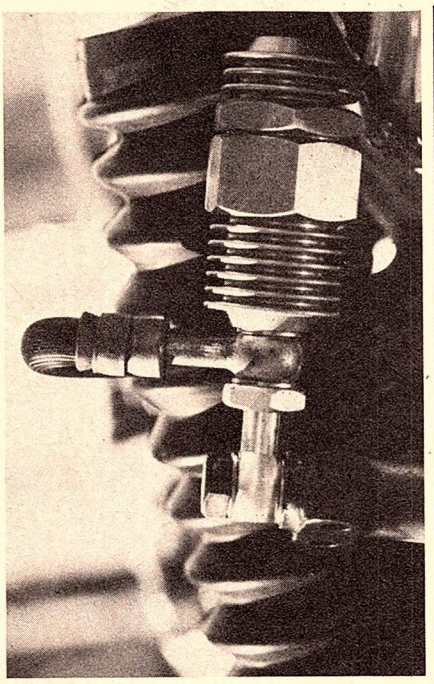
If you remove the banjo fitting from the junction and then install the Safety Braker, you are probably twisting the hose. So, loosen the hose and metal pipe nuts and turn the banjo until the twist is out of the rubber hose. Retighten the nut fittings.

Install the Braker banjo using the stock brake hose bolt.

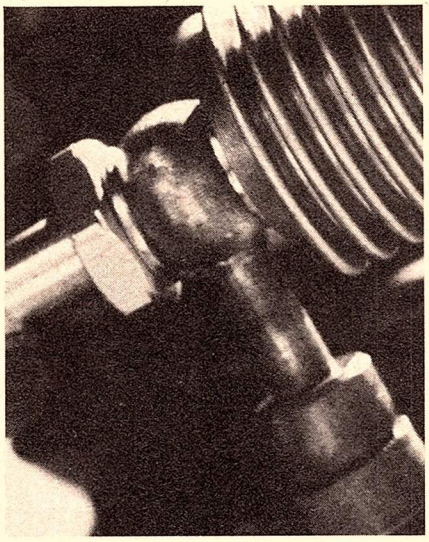


You will need special crush washers to install the Safety Braker on the supplied banjo. Most bike shops will have those special washers. The cost is approximately 22¢.

Carefully turn the Safety Braker only. Hold the banjo fitting stationary.



Remove the bolts that hold hydraulic junction box and position the Braker in this manner. Positioning the Braker upside down, makes any air bubbles rise out of the Braker and bleed out of the brake lines.



Bolt back the junction box. The position of the Safety Braker M/C is right in the stream of rushing air. This could be one of many positions the Braker can be installed.

up under hard braking, obviously you have passed its potential. Heavy duty braking for racing purposes is a learned skill.

The Safety Braker works in this simplified manner. When you squeeze the brake lever, you are compressing the fluid through a pliable hose and steel tubing. Once you have compressed the fluid, and expanded the hose, the brake fluid has no place to go but to press the brake pads harder onto the discs, thus slowing down the wheel.

With the Safety Braker M/C in place, the more you squeeze the brake lever, the more you compress the rubber type plunger into its hollow housing.

This plunger type effect prevents the brake pads from locking the wheel sooner than expected. Instead, the fluid is cushioned by the Safety Braker unit.

The Safety Braker M/C is probably what the average street rider is waiting for.

The Safety Braker is recommended for those riders who are not confident enough of themselves to use the front brake. The front wheel is the most apt to lock up and cause a faster spill than a controllable rear wheel skid.

When the front brake is applied, the weight of the motorcycle is shifted forward. So the front brake works harder to stop the motorcycle; about 70 to 80% more than the rear wheel.

The rear wheel will bounce up and down, hopping and skipping over the surface because of the lightness of the rear end due to the weight transfer.

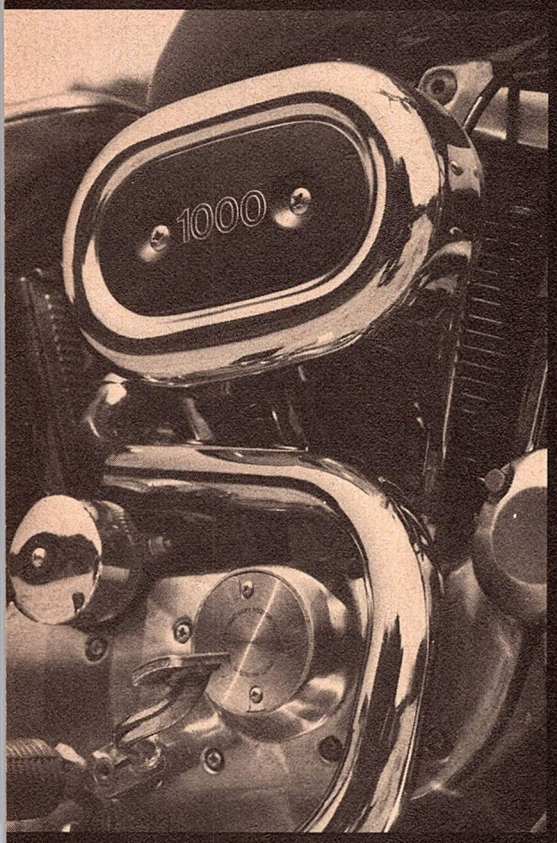
Since the Safety Braker works so well on the front brake that it eliminates wheel lock up, then anyone owning a rear disc set-up should take a good look at the Safety Braker M/C.

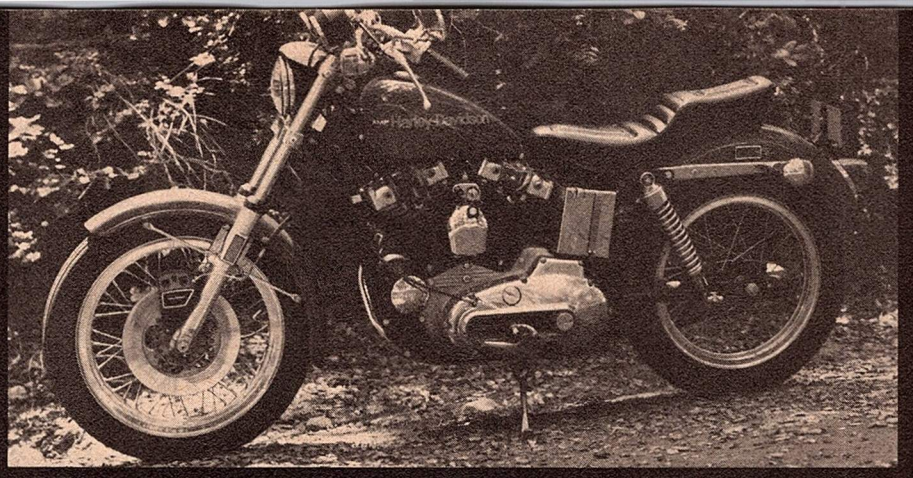
The GS 750 Suzuki falls into this category of sensitive rear wheel lock up. We installed another Safety Braker on the GS for the Six Hour AFM race here in California. The rear brake worked so well with the Braker on, that I tried to make it lock up. The rear wheel did lock up and was more controllable because the Braker compensated for the skidding action via damping the plunger.

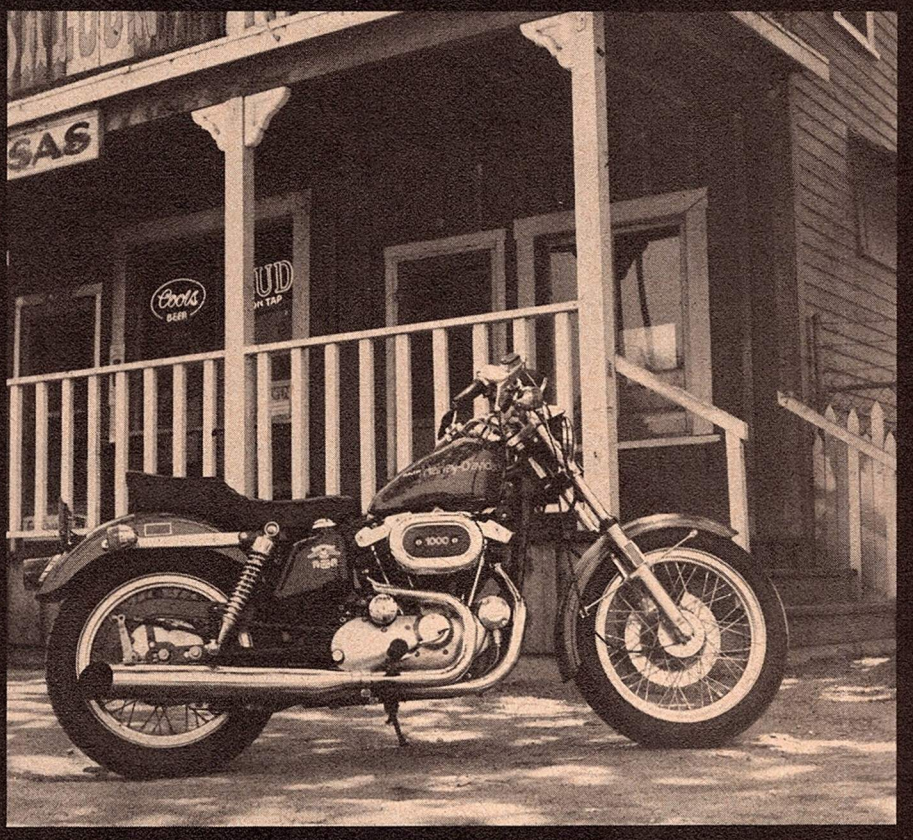
If you have sensitive disc brakes or would like to be more confident using the front brake, which is the most powerful of the two braking systems, then contact: Safety Braker M/C Sales Co., 78 Lake Meadow Drive, Daly City, CA 94015 or call (415) 755-8761. ■

/C Unit

Stopping on a dime?







HARLEY-DAVIDSON
MADE IN
USA

(Continued from page 56)

THE SPORTSTER

No, it all comes back to the point that a Sportster is a cruising machine. It is an American cruising machine like a Chevrolet or a Dodge. You don't have to make excuses for it because this is the way it's done here in America, BIG.

There is no doubt about this point at all, even though this is the smallest of the Harley V twins, it is still a very large machine. Fortunately the only way you're really going to find out how heavy the Sportster is would be to either read the weight on the specs page or drop the bike. The specs page is the best, you don't have to worry about getting a hernia.

The reason you don't feel the weight is that it's carried so low in the frame it actually feels rather agile and it is. Although there isn't much ground clearance because of the footpeg, you can still move down a twisty road at a pretty good clip. With the addition of a different set of bars. Koni shocks, and a little work on the front end you might have a decent little canyon racer. Also you'll need a change of tires. One thing is for sure you'll be able to pull anybody out of the corners and in a tight canyon you could probably beat them.

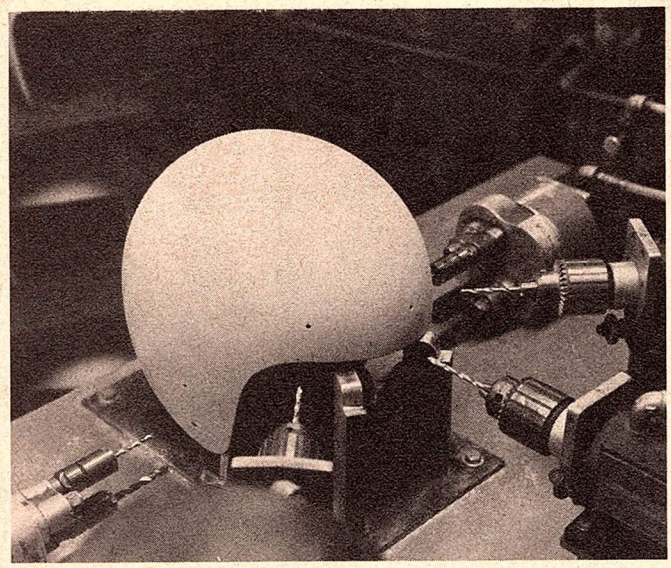
But it's really hard to imagine anybody actually doing something like that to a Sportster. If a Sportster owner does anything, he'll usually get his hands on a frame from somebody like Arlen Ness or Drag Specialties and make it into a Bay area style chopper.

This style of machine has evolved primarily from drag racing. It features a hardtail type frame (no rear suspension), usually a single very small seat, very small tank, modified drag bars and a slightly extended front end. Most of the time these bikes are not even performance oriented, they are strictly for cruising the main drag on the proper nights.

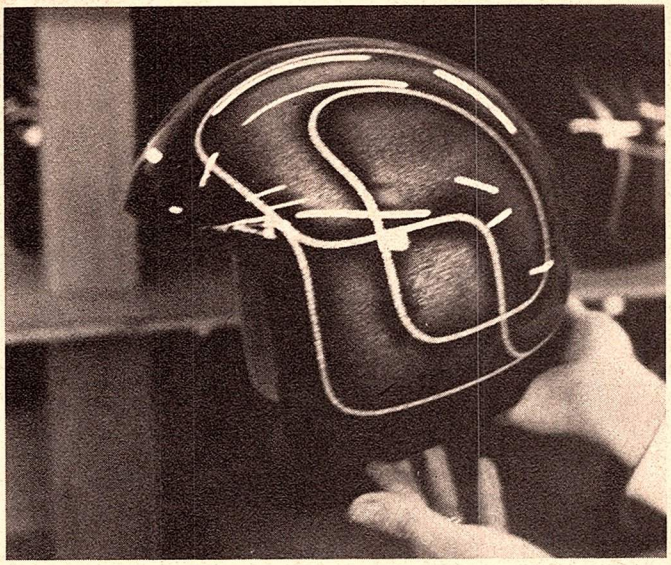
As you can see even when the Sportster is taken out of the stock package it comes in from the factory it winds up doing the same thing, cruising. But maybe that's what it does best.

It's hard to understand a machine like the Sportster. But you don't have to understand something to have fun on it and with it. In this particular case that is not hard to do because the Sportster is a fun machine. If you enjoy riding then there is a place in your heart and garage for the Sportster.

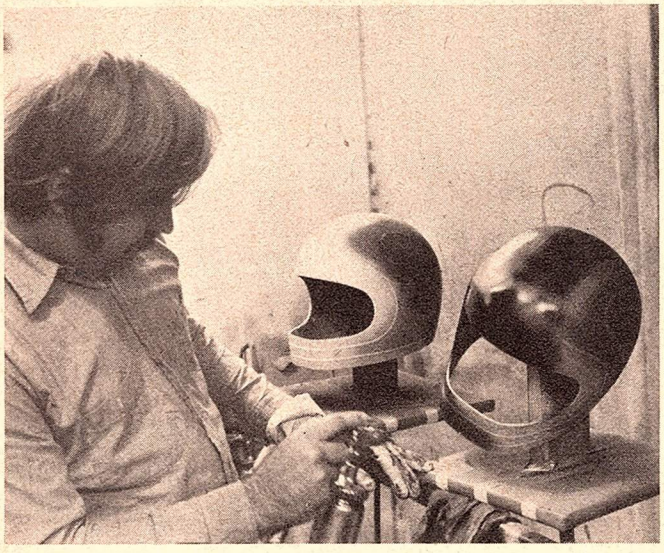
Obviously there are many people who agree with the Harley people because they keep making them and customers keep buying them. If that is the mark of success then the Sportster is one of the most successful machines ever sold. If you think I'm kidding, walk into your local Harley dealer and get on the waiting list for a brand new one. A Sportster is a real motorcycle. ●



After trimming and removal from the molds, the shell is drilled and sent to be finished.



. . . to look like this.



In solid color, the helmet is immediately clear-coated and assembly resumed. On one of Electro's styled models the airbrushing is done entirely by hand and then clear-coated . . .

The safety liners and comfort pieces are assembled separately and squeezed into the shells, straps are mounted and the rubber beading rolled around the edge.

HELMETS

(Continued from page 35)

I may make in five years. Combine that with all the rejected helmets and parts, which are all loss, and you begin to see that it's not all gravy.

Think about that the next time you buy a new helmet and find that it's costing considerably more than your last one. Everytime another squid sues a helmet company for an outrageous reason, insurance rates jump up like a bee-stung jackass. Three guesses who pays the difference.

But we're getting off the track here. About this time Jim Young enters and the topic of conversation is another facet of quality control, namely, destructive testing. Samples of every production run are taken and literally destroyed to make sure the helmets meet the current tests: DOT, ANSI, and all the tests required by foreign countries.

This is where the inch thick safety liner and fiberglass shell earn their keep. Five years ago, when there wasn't any federal safety standards (for helmets) to speak of, safety liners were normally one-half inch thick and made of considerably dense foam. If you have an old helmet take it out and look at the liner. Sorta makes you wonder which is harder, your head or the foam, huh?

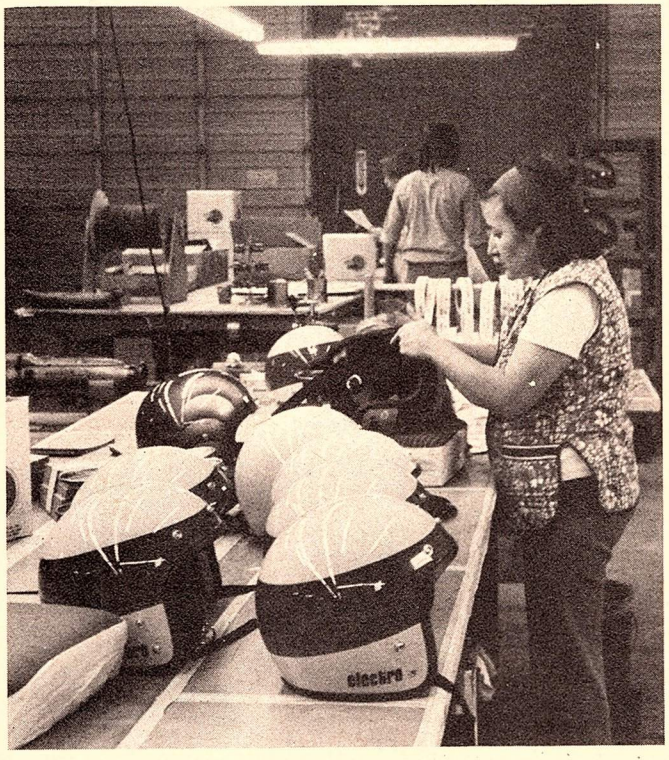
Now this old liner may be able to absorb just as much impact as our new Electro, but it does it in half as much area. Which means that the entire duration of the impact is going to be greater. Keep in mind that the whole job of the liner is to absorb impact, not last forever. It is designed, just like the shell, to break down when sufficent force is applied, and thus soak up all that nasty energy. This is evident, in crashed and tested helmets by rapid delamination of the shell, and/or crushing of the liner. Needless to say, we hope, if your helmet exhibits any of these symptoms it should be replaced with all due haste.

While we watched, a helmet was impact tested, (dropped, weighted on the immovable object, a steel anvil, until

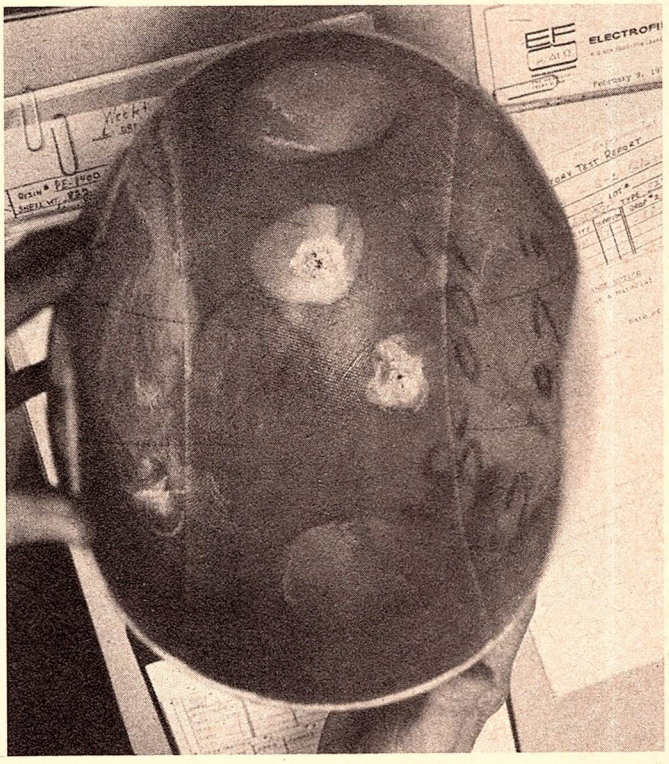
failure of the helmet was indicated on the test equipment) penetration tested (a 6.6 lb. spike is dropped ten feet onto the helmet to determine degree of penetration) and then had its chin strap ripped out by particularly heartless machine.

All this to make sure that the helmet protects you to the degree that all the standards organizations dictate. Isn't that nice? Our test helmet did admirably, being well within the limits. Actually, it seems, it took more to rip the chin strap out than the average neck would need, but this is only conjecture.

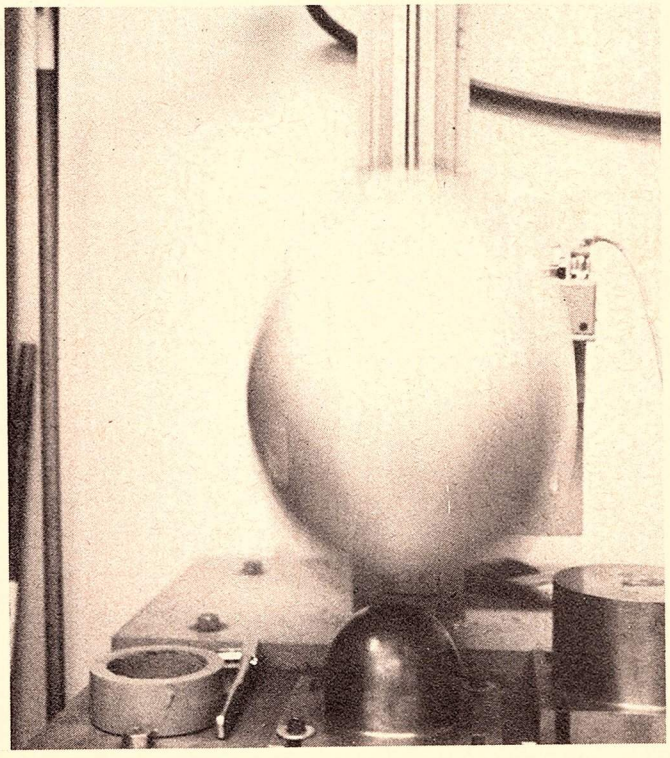
We found the people amiable and their product excellent in all respects. True, they don't make the cheapest helmet on the market, but someone has to pay for all that quality, and it may as well be us. Who was it that said "If you have a ten-dollar head, buy a ten-dollar helmet?" Aptly put. ●



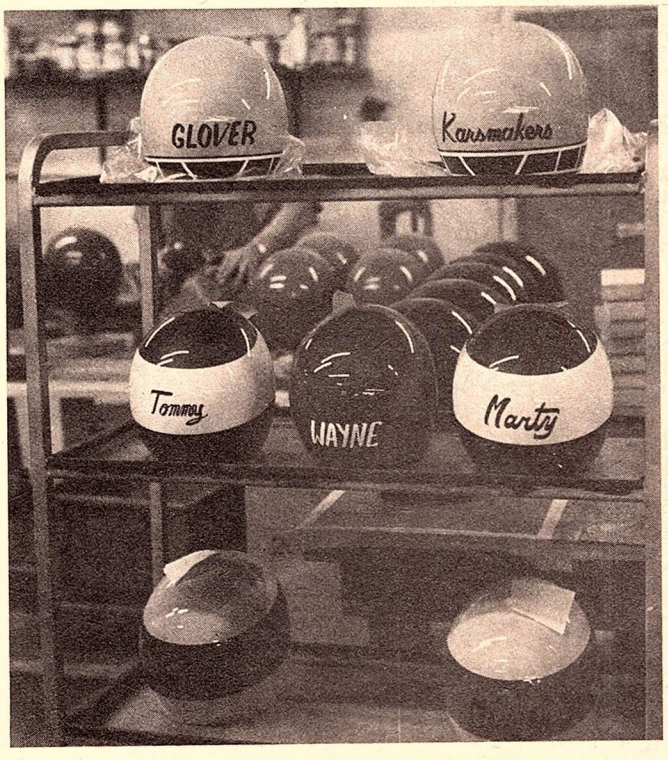
Final inspection and quick wax job and another "ELECTRO" is ready to be shipped.



The tell-tale signs of destruction.



Jim Young flips the switch that destroys yet another helmet. An everyday occurrence in the quality control department.



Not too shabby company to be keeping.

ABUSE A MOTORCYCLE

(Continued from page 54)

had no trouble going the distance. We felt very secure through the entire race and never experienced any slipping or other unsettling moves from these tires.

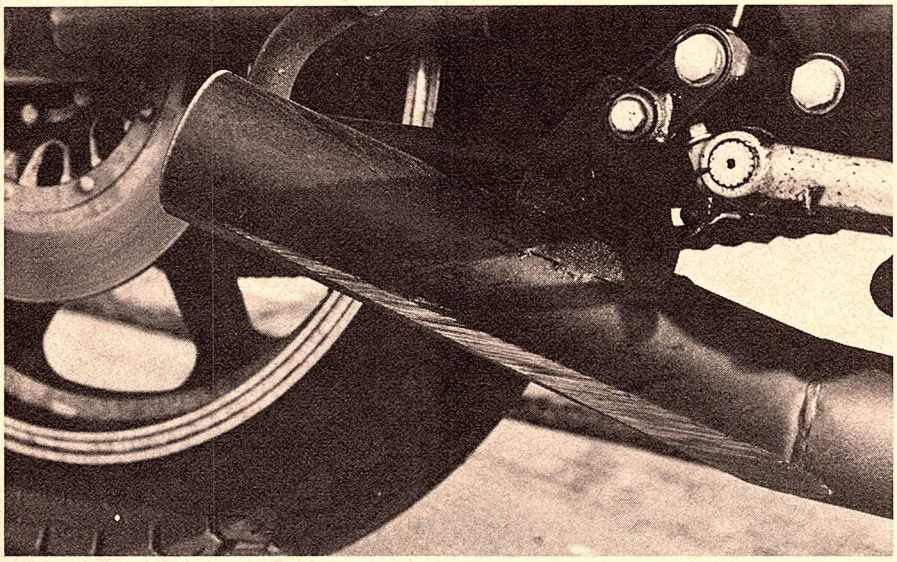
Another way we got unsettling moves out of our race bike was by mounting a Safety Braker on the very touchy rear brake of the Suzuki. This is a very obvious flaw with the Suzuki, but the Safety Braker cleared it up completely. The Safety Braker does this feat of magic by damping the flow of fluid to the calipers. It fits into the line, either at the master cylinder or back by the calipers, and instead of just allowing the fluids to rush into the caliper there is a rubber piston device inside the housing which absorbs some of the pressure. All of this was accomplished without a loss of braking power and with the only difference being the feel of the pedal, which becomes a little mushy.

One department many big bikes have problems with is the drive chain. Just on the street it can be something that drives you crazy, but while you're racing you don't need the problems of having to worry if your chain is either dry or too loose. We solved this problem in one big move by mounting a Tsubaki 630 self-lubricating roller chain on our racer. This chain is the best thing since rubber soles on tennis shoes; it works!

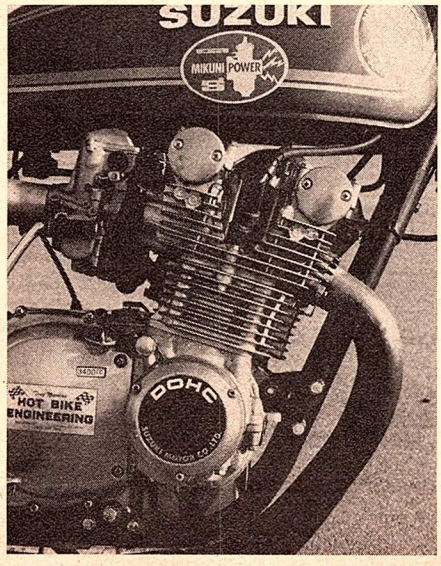
The Tsubaki chain was mounted on the bike on a Saturday and then the machine was run in four 10-minute practices and then raced in two 10-lap sprint races with no adjustment. On Sunday morning the chain was checked, received a minor adjustment and then ran all six hours without a single adjustment. Also we never had to lube it because the Tsubaki is a true self-lubricating chain.

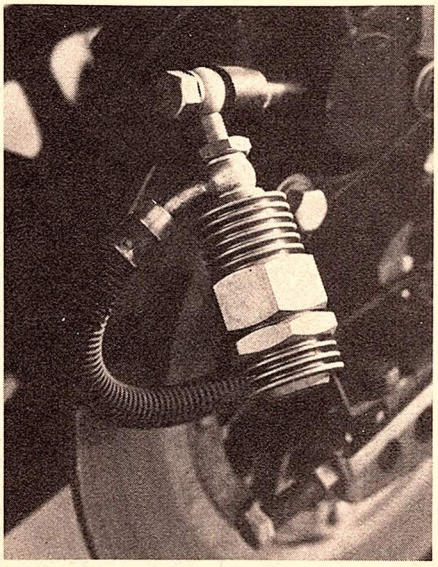
If you suffer from paranoid feelings about your chain coming apart and destroying your engine cases, you need a super tough Tsubaki. Ask your dealer to order it for you from SUDCO International, he'll recognize the name.

Our bike was well prepared and we managed to finish the race without any further problems. Although we felt we could have done better, the six miniutes in the pits cost us a place or two and we had to settle for a fifth in class, sixteenth overall. There's always next year. ●

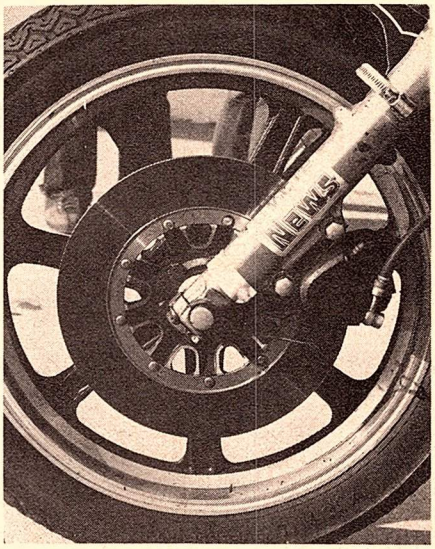


Escargot pipe added top end to the GS, but we found that it could be grounded in some of the tighter turns on the Ontario infield.

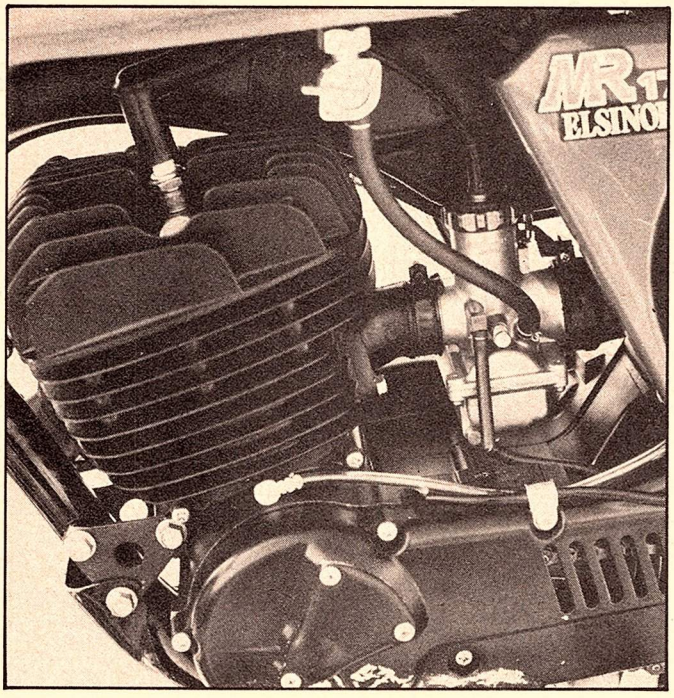


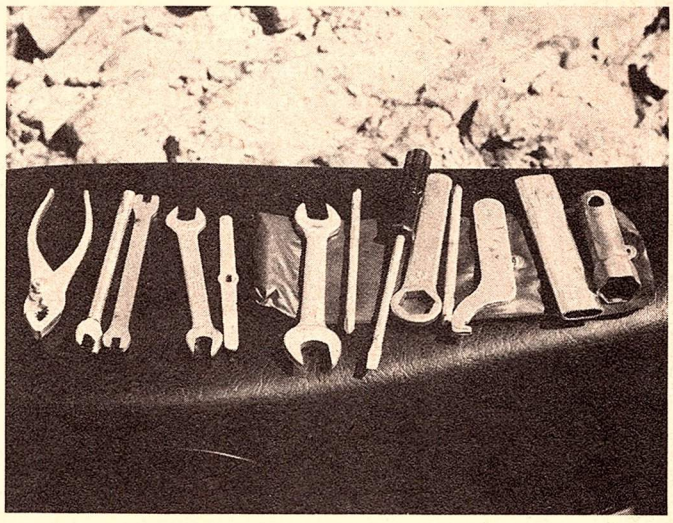


This is a Safety Braker. It cured all of the braking problems the Suzuki has with its touchy rear disc.



Lester Wheels front and rear not only made the bike look better, we also didn't have to worry about spokes coming loose.





Copious tools are included for the mechanically inclined.

Everything's the same as last year except transmission: gearbox ala MT 125.

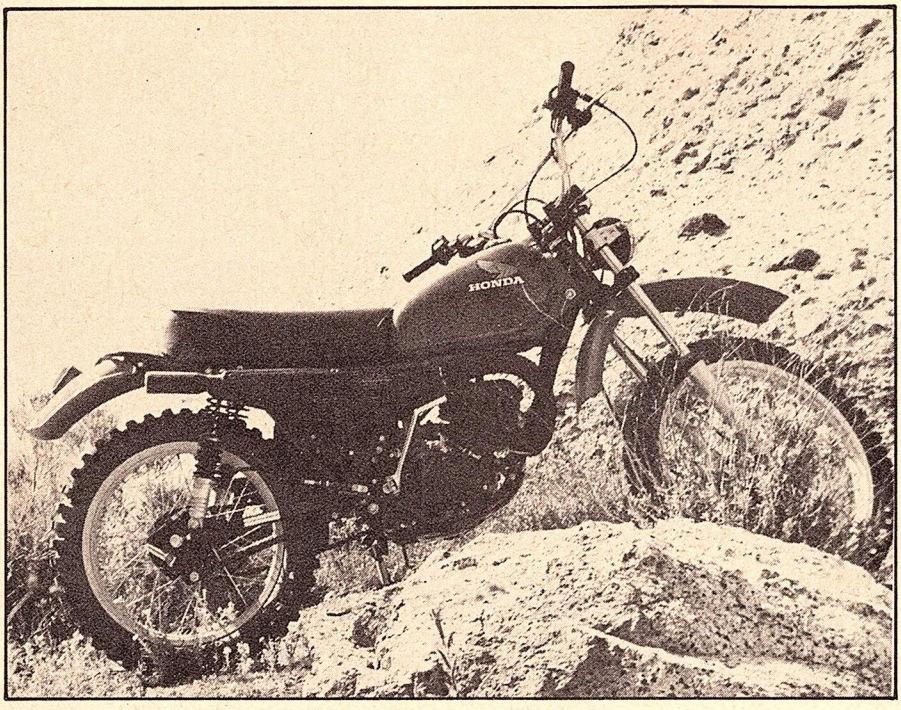
HONDA MR 175

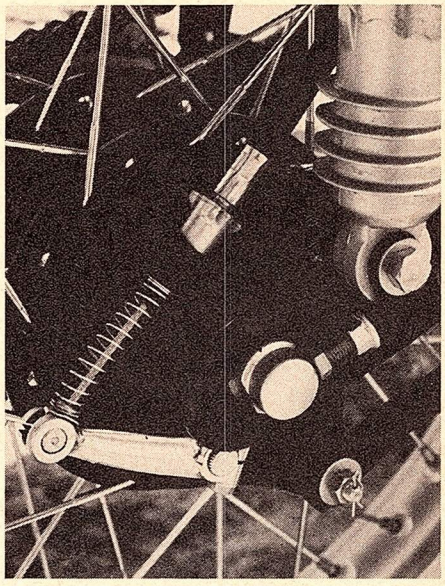
(Continued from page 51)

I got tired of eating Rik's dust, so I moved up to second place, right behind Brian's TT-500. Skipping through the whoopdies at speed, more up in the air than not, the MR's weight, or lack thereof, make it easy to control while the gearing and power almost turn it into work. The bike definitely demands attention to keep buzzing right along. A good top speed falls right between, you guessed it, fourth and fifth. And it's screaming time, then upshift, but don't let up on the gas or it'll die right in your lap. UPshift, downshift, UP and down. Whew. This bike was not made to be ridden fast.

And then I hit the Joshua tree. Nancy must have told you about that one, I tried to brush it out of the way like a scrub pine. Compared to a scrub, old Josh is as resilient as a brick wall. I must have been doing fifty and I never crashed so hard before in my life. It put my lights out for a few seconds, but the Honda survived admirably. Only tweaked the front end slightly and moved a steering stop. Oh yeah, the rear fender has a permanent crease in it now, but it didn't break. Neither did I, thankfully, but I sure felt like hell in the morning. Sorta like having someone beat on you with a DT-1 fork leg.

But I digress. I rode it again a few weeks later in the hills this time. It had rained a few days before, so there was actually traction in places. The scene was a national enduro, playing magazine photographer. When I had to pick a bike for transportation the Honda was a natural. The weight is minimal, (a hell of a lot less than my Penton) the handling is good. It always starts, except whenever I forgot to throw the kill switch in the other direction. Just plain stupid I guess.

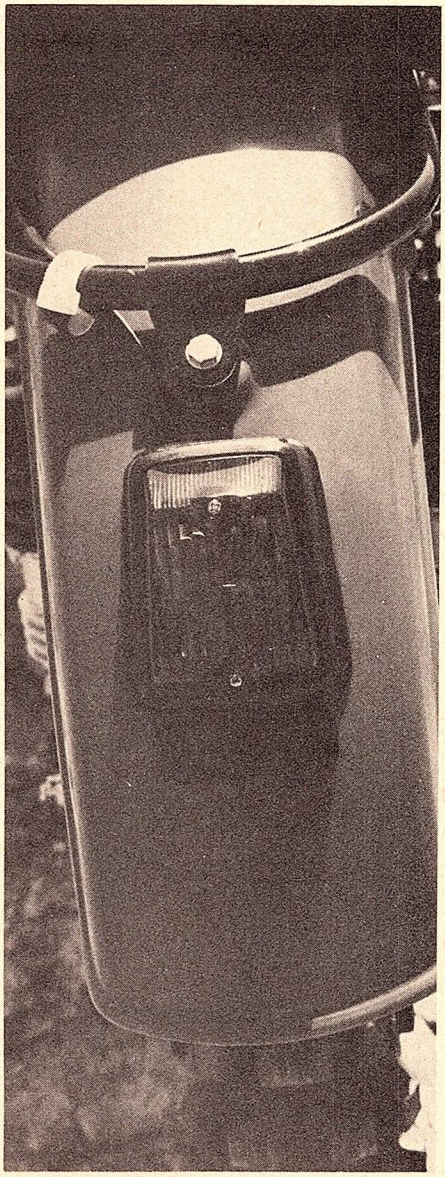




Rear hub/swingarm adorned with a minimum of trash.

HONDA MR 175 SPECIFICATIONS

Name and model	Honda MR 175
Engine type	2 stroke
Bore and stroke	66 x 50mm
Displacement (cc)	171cc
Compression ratio	6.8:1
Carburetion	Keihin
Fuel tank capacity	2.9 gal.
Fuel tank material	Steel
Lubrication	Premix
Air filtration	Foam filter
Clutch	Wet oil type
Transmission	5 speed constant mesh
Gearbox ratios:	
1. 2.357 to 1	4. 0.916 to 1
2. 1.611 to 1	5. 0.741 to 1
3. 1.190 to 1	
Primary drive	Helical gears
Ignition	Flywheel magneto/points
Primary starter	Yes
Silencer/spark arrester (if any)	Yes
Exhaust system	Muffler
Frame (type)	Semi-double cradle
Overall length	81.7 in.
Wheelbase	53.7 in.
Ground clearance	9.8 in.
Seat height	32.9 in.
Overall width	35.0 in.
Wheels/rims:	
Front	21 in. DID alloy
Rear	18 in. DID alloy
Tire sizes:	
Front	3.00x21
Rear	3.50x18
Brakes/hubs:	
Front	Internal expanding shoe
Rear	13.4 sq. in. sweep area
Suspension:	
Front	Telescopic fork
Fork travel	7.3 inches
Rear	Swingarm, 4.1 inches
Fender material	Plastic
Color(s)	Red
Intended use (fact.)	Off road
Warranty, if any	None
Where made	Japan
Distributor:	
American Honda 100 Alondra Blvd. Gardena, CA 90247	



Smallness of taillight is only outdone by the Suzuki PE.

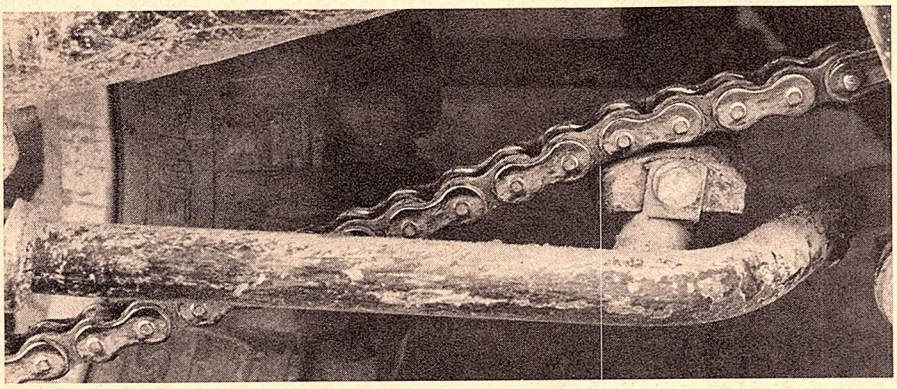
But I suppose that that's where the attraction is for this bike. (No, not stupidity!) The simple fact that it is a good, dependable, easy to handle ride for a laid-back day in the woods. Good commuting - through - the - checks - the-easy-way machine for photographer types. May even be good for between the checks the rough way in the proper conditions. Condition one: Don't go faster than necessary, a good tight enduro would be just right.

Condition two: Watch out on the hills. The bike doesn't have the beans on the bottom to lug up to the top, and the lack of flywheel produces wheelspin too easily. More flywheel can be had, I'm sure, but when we figure out how to get more down low I'll let you know. There's been a lot more four-stroke folk making the enduro scene these days. Methinks I see the reason why.

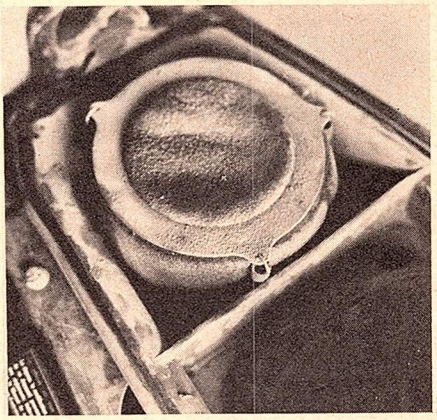
Ah yes. "If a bike doesn't have any top end, it just ain't fast." Supe, when are we going to learn? I'd really like to see the stump-pullers of yesterday in the frames and suspensions of today. But all the screaming for horsepower when the bottom line is torque. "Torque, my boy," the Sage said, "makes the world go round. A spinning wheel gathers no speed."

But I did like it, really. I'll say right now that you're in a better position than me, 'cause the Honda's an East Coast bike, that's for sure. Just the thing to haul out of a mud hole without splitting a gut. Easy to flick in and out of the trees with. And more than enough traction out there to control the wheelspinning. Hmmmm. How 'bout if I borrow your bike for a while the next time I'm in Jersey? I promise I won't hit a Joshua tree with it. ●

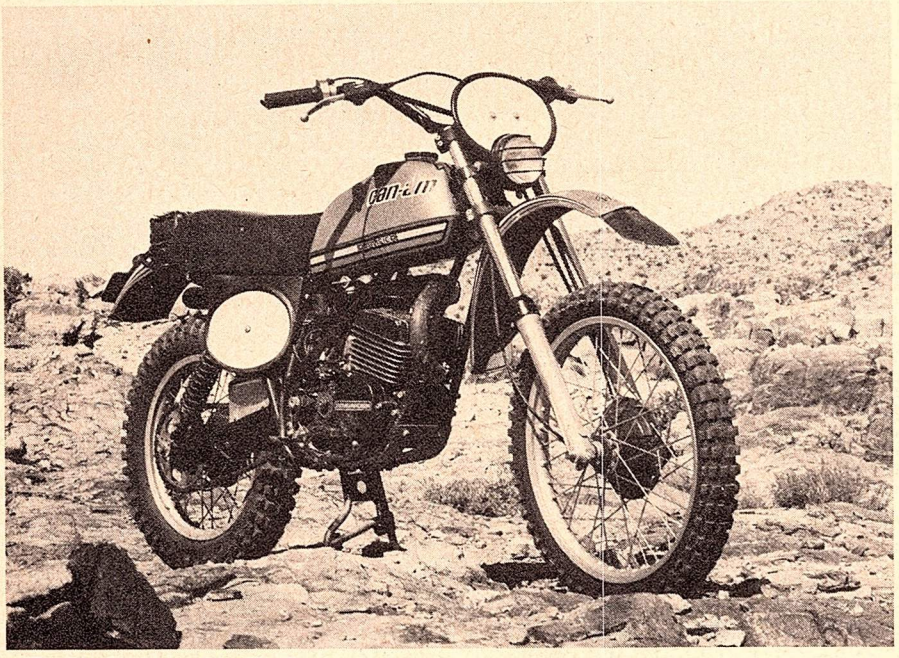
—Paul

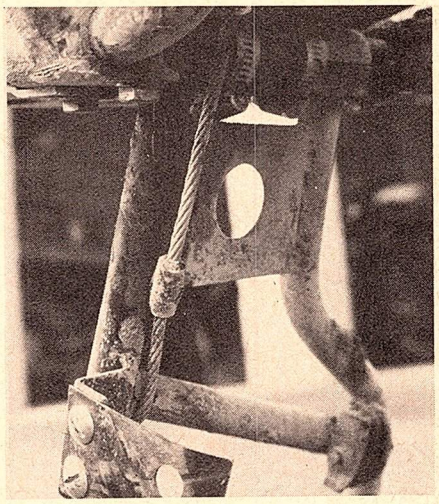


The center stand, when locked upward, doubles as a chain tensioner.



The air filter element is well protected and easily serviced.





The cable running from the center stand to the frame is what limits the downward travel of the stand.

CAN-AM

(Continued from page 43)

The stock bars are designed with a V-shaped crossbar, which gives more strength, but eliminates the convenient placement of most enduro instruments.

The 175 Qualifier in overall riding impressions is a big step forward for Can-Am, but is still not without its idiosynchrasies. The engine is fast and peaky, in a Penton sort of way, and although we personally prefer to see a bit more torque, that kind of power is preferred by a considerable amount of riders, and has been utilized quite successfully in the events the bike has been named after, the qualifiers.

The kind of power is a personal like, and it can't be denied that the Qualifier has plenty to offer, but some playing with the steering head cones and shocks will help bring the handling up to a level where it can compliment the engine. At the point where the two will work together is where the Qualifier will find the real potential it's capable of. Can-Am has been on the track for quite awhile. They're almost there. ●

CAN-AM QUALIFIER 175cc

Dimensions: (inches)
Overall height (w/out mirror) 46½
Overall width (w/out mirror) 34
Seat height 34½
Ground clearance 10½
Wheelbase 55½
Overall length 84
Chassis:
Type ..... Tubular double loop space frame with tapered backbone
Front suspension .... Betor teledraulic 7.5″ (8.2″ WRS)
Rear suspension .... Gabriel of Canada shocks 7.3″ wheel travel
Fork angle .... 30° standard, adjustable from 25° thru 31°
Brake:
Front/rear .... Drum, single leading shoe 6″x1″
Rim:
Front .... WM 1x21″ alloy low profile
Rear .... WM 2x18″ alloy low profile
Tire:
Front ..... 3.00x21 knobby
Rear ..... 4.00x18 knobby
Dry weight ..... 228 lbs.
Liquid Capacities:
Gas tank .... 3.0 U.S. gal./2.5 Imp. gal.
Oil tank .... 2.3 U.S. qts./1.9 Imp. qts.
Transmision .. 1.2 U.S. qts./1.0 Imp. qts.

Engine:
Type .... Rotary valve, 2-stroke, single cyl., air-cooled
Bore ..... 62mm (2.44″)
Stroke ..... 57.5mm (2.26″)
Displacement 173.6cc
Compression ratio 15:1
H.P. at rear wheel ..... 24 at 9000 rpm
Lubrication ..... Oil injection, variable volume
Starter ..... Foot operated left side in gear starting
Power Train:..
Primary drive ..... Straight cut and ground gears
Clutch ..... Multiplate 5 discs, oil bath 6 discs oil bath
Transmission .. Constant mesh, 6-speed
Gear ratio:

1. 3.40	4. 1.31
2. 2.31	5. 1.05
3. 1.68	6. 0.96

Chain 520
Carburetion:
Carburetor type ..... Bing 32mm
Air filter ..... Foam, oil impregnated
Electrical:
Ignition system .. Bosch electronic C.D.I.
Maximum ignition output .... 30,000 V
Spark plug type .. 14mm—3/4″ reach
Spark plug number N57G
Maximum alternator output 55W

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EASTERN

(Continued from page 16)

an additional element of comfort for the racing weekend. Snug and warm we enjoy the rest of the evening.

Sunday morning. Clean underwear—the armor of the righteous. It's still raining and its pitter-patter on the roof merges contrapuntally with the solid munching of prepackaged breakfast sludge. Wake up it's RACE DAY! Bringa-bringa-vroom-vroom, etc.

The Thompson pit area is dirt—with a large puddle or small lake now covering a substantial portion of it. The wise have taken the high ground and so I trudge in an uphill direction.

Breakfasts are being cooked. Some people are already busy at last minute preparations. Here's one now twisting some more safety wire on his 650cc water-cooled Silk two-stroke twin. Obviously this isn't your average racing machine, the huge brass radiator alone would hardly merit a second glance from the budget conscious. Dave Roper, the wire twister, explains that the Silk is an updated version of the old Scott of eldritch vintage. The engine is mated to a 4-speed Velocette gearbox. A single Amal feeds the two cylinders and it has a 2 into one exhaust/expansion chamber system. I back away respectfully.

Mike Baldwin is standing next to his van surrounded by friends and well-wishers. He's telling them he's making the big move, got himself a TZ750 and is going for it. The TZ's tied down inside though, on account of the weather. Why risk it? However his orange RD is out and though ubiquitous there are legends associated with this particular one.

Across the way is Rich Schlacter. Of Daytona Lightweight Race fame. Has it brought him anything?

"Satisfaction, it's helped with sponsors—Dunlop tires—we have a few other things in the coals now but nothing really definite."

"Do you enjoy a good relationship with Kevin Cameron?" (his tuner)

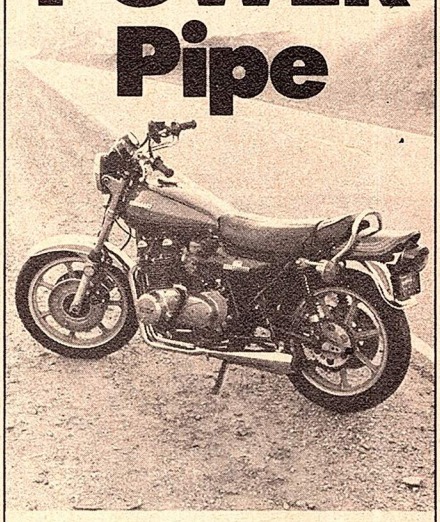
"Yeah, I think we get along good. We can communicate, too, which is really a big help. We sit down and talk and listen to each other. You know, if I think it's too rich in the midrange he'll suggest something and I'll come back and suggest something and we'll more or less put something together. It usually works out.

We had some problems at Daytona with the midrange on the 250 and at Charlotte it seemed to be a lot better so we're gaining."

What do you think of AAMRR racing?

"Like it. It's good. There's Michael (Baldwin) and a bunch of other guys

The POWER Pipe



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that really get it on, and I think that's really great. It gives you a good practice for the AMA Nationals. To ride fast with other people who are riding fast. If you're all alone out in front you really don't have anybody pumpin' you or pushing you."

So the fact that there's a company of fast men here—

"Yeah, we hope 3 times—Riverside, Laquna Seca, and Sears Point—hope to—."

Mary Arbuckle from the film department at MIT is out on the track tied back on a bike aiming a 16mm movie camera at a gaggle of riders she's facing. Rain and roostertails. I think I'd have to take money to do something like that. Mary needs the footage to finish up a film she's making on women roadracing, featuring Carter Alsop, who, incidentally is our next quest here on Meet Everybody.

Carter Alsop, 27, 5'6", 127 lbs.—too often described as the lady who sewed her own racing leathers. She's been granted an AMA Novice Racing license, the first of her gender to be so honored. She's been roadracing since 1975. In 1976 she would ride her 750 Honda to the track race it and ride home.

She designs and makes plexiglass furniture. She's also manufacturing the clear plastic bubbles for the GP bikes and expects to have a broad market for them in the U.S. and Canada.

Carter will be graduating this year with a degree in Art and Medieval English Literature.

She doesn't have her own ride this weekend but she's well-liked and will be able to borrow a 550 Honda for the MS Match.

* * *

That was a Richard Chambers interview. He's so interesting I forgot to thumb the tape recorder. He can talk the paint off a wall. He's the salt of the earth. Maybe next time.

Racing better commence soon I'm too burnt out for anymore interviews.

The Thompson track is shaped like a backward "L" with a knobby heel. It uses a large portion of an asphalt oval and then goes off behind some sand hills. It's pretty flat though the oval is banked and I've already told you the straights are bumpy.

Noses are sprouting ductape negative lift wings. These help keep face shields from getting fogged. John Bettencourt and Wayne Sullivan have on

(Continued on page 80)

SUMMER SALE

Prices good from July 15, 1977 to Sept. 1, 1977

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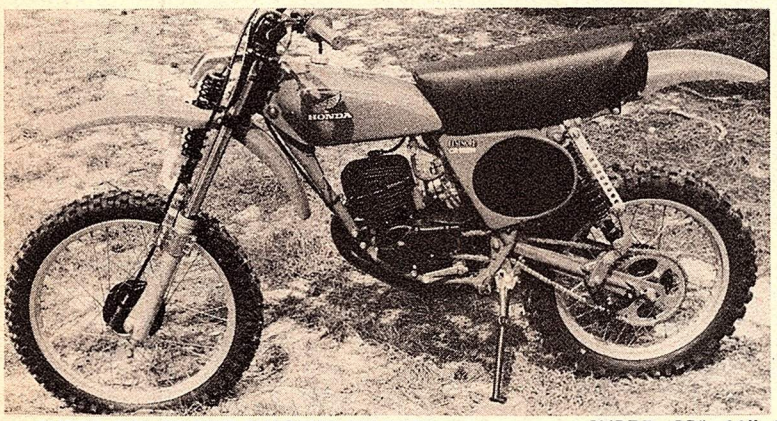

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Post Entries

(Continued from page 7)

My R75/76 needs tires and I tour in rainy British Columbia frequently. Rather sorry a set of Metzelers (touring) were not tested as on a wet oil free road they're not so bad on a laden down BMW.

I think your choice of test machine is good. If a tire works well on a machine with the Kawasaki's power, it should come out smelling like a rose on a less powerful bike—maybe.

Raymond Hansen
Calgary, Alberta Canada

Unfortunately with the drought here in old sunny Cal we haven't been able to find any wet roads to test the tires on. We tried to wet down a skid pad, and almost were arrested. Part II will be along as fast as we can knock it out, so just hang on tight to part I.

Adding On

I own a 1973 CB 750 Honda and I want to beef up the engine some but I don't know where to start. I was hoping you could help me out a little bit. I have about $700 to spend, but I want to put it into the right place. Racecrafters seems to be people to buy from, but there are so many different things to choose from that I don't know where to start. Maybe a big bore kit, but I don't want to bore it out all the way. The cam kit seems to be a good deal, but what kind of carbs should I use, and what size? I was thinking of an ignition system too, but would that be needed? What do you think about having the head ported and polished? Maybe have the engine balanced too? Any kind of guideline you could give me would be great. Thank you very much for your time.

Chris Smith
Great Lakes, Ill.

I advise you to increase the bore size to 811 or 836cc. If you choose 811, you will have enough room for another one millimeter bore. If you bore to 836, you will be to the limit on the standard sleeve. The bigger bore kits usually need to have different sleeves installed. Those kits are 890 to 1,000cc. I suggest either RC ENGINEERING or ACTION FOURS. You should use a fairly mild cam for street use as this will allow more low end power and give good top and mid range also. A 4 into 1 pipe will also help. In choosing carbs, most of the kits work with stock carbs, or go to a set of Mikuni smooth bore 29mm. A CDI ignition is a good way to go, and I suggest either the Gerex Multi-fire or Dyna-Three types. Balancing is good, but not all that critical. Honda

has good quality control, and the piston kits are balanced very closely. Porting is an all out effort, and should only be attempted by persons who can do it properly. I have seen a great many motors not run from not having the proper porting. If you want to port the head, have either RC ENGINEERING or ACTION FOURS do it. You will then know it was done right.

A good guide to follow is to buy the complete coordinated kit, don't try to mix things, like this cam and those springs and someone elses pistons. If you wish to write:

RC ENGINEERING
16216 So. MAIN STREET
GARDENA, CA 90248

Or:

ACTION FOURS, INC.
1517 E. McFADDEN STREET
SANTA ANA, CA 92707

He Needs Help

Dear Sirs:

I need help! I have a 1971 Honda CB 100. My problem is my clutch. I want to know how to adjust it. It is too stiff and hard to pull in. I want to know how to loosen it up. Also I would like to learn how to work on a motorcycle engine. I am only 15 years old, and that is too young to work in a shop so what should I do?

Henry Page
Houston, Texas

Maybe this will help you with your problem. To loosen up the sticky clutch, first loosen the cable adjusters on the handlebar lever and the one on the engine. The one on the engine is right behind the kickstart lever. Now, take the cable out of the handlebar lever and lubricate it by pouring light oil (DRI-SLIDE, PETROCHEM CABLE LIFE or any light oil) into the center cable. Then, put the cable back on the lever. go to the lever on the engine. You should see two punch marks. One on the lever and one on the clutch cover beside it. You now need to line up both dots. This can be done by loosening the nut and turning the adjusting screw (these are on the clutch cover just above the rear brake pedal). Turn the screw until the dots line up, then tighten the nut down. Now readjust the cable at the engine lever and the handlebar lever and go riding.

About working in a shop, I don't think you are too young to learn to be a mechanic. There are schools you can write to, also reading shop manuals would help. You might ask around to some of the shops in your area, sometimes they use young people after school to help around the shop (clean parts, run errands, even put new bikes together). I know of some excellent mechanics that started just that way. ■

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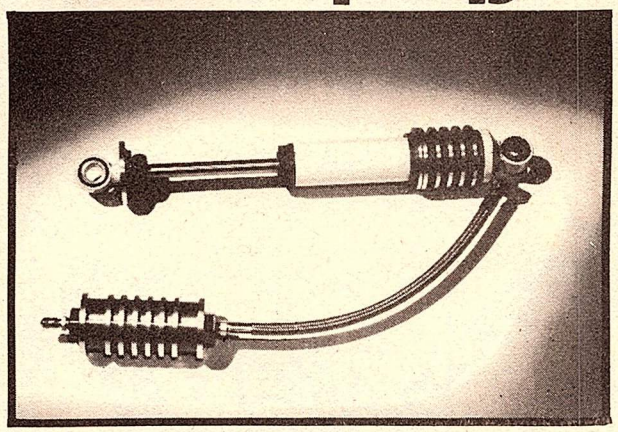

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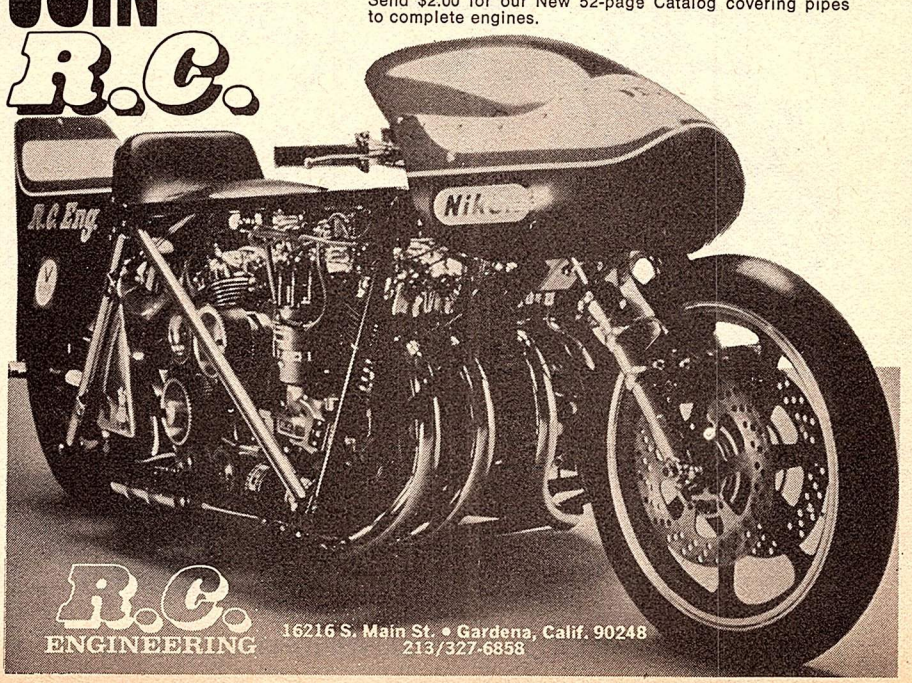

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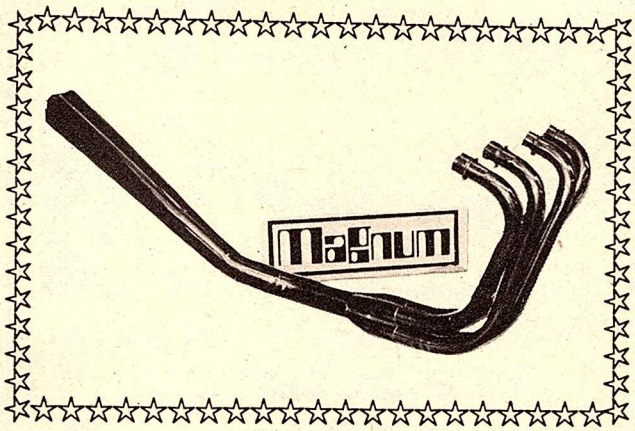

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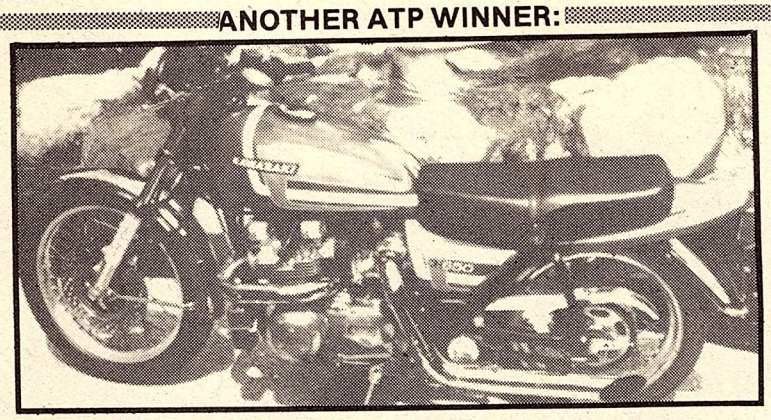

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Catalog $2.

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SUZUKI RM-100B

(Continued from page 47)

marriage of lining material and engineering.

Front brake is strong, too. Only two fingers are necessary to provide adequate braking power in the dirt. A big handful will easily lock up the front.

We find no complaints with the stock tires. Pressures ended up at 12 lbs. front and 10 lbs. rear. (More pressure may be necessary for rocks or extremely rough tracks.) Tires don't seem to be nearly as critical on the lighter bikes as opposed to the 250cc and larger machines. Traction and torque application are two of the factors considered.

TRACK TESTING

Starting is a little tricky. Each bike seems to have its own procedure which, once found, is easy to repeat. Even with the low compression of the 100, the rider must give a swift boot to fire the baby to life. When warm, we found that about one-third throttle was always necessary to restart. Cold starting with the choke only, required half a dozen or more kicks to fire. Once running, the 100 also displays the cold blooded RM temperament. Experienced RM riders started the bike easily, but Suzuki part-timers had a little more trouble.

The bike feels very much like the RM-125A. It is narrow and noticeably shorter than the newer RM. Bar/peg/seat relationship is good, even for larger-than-six-foot riders. The lower height enables the smaller rider to be able to keep the bike upright at the starting gate without the aid of elevator boots or earth moving efforts.

Once a rapport is built between rider and clutch lever, the 100 is a veritable rocket. For the big bike rider, it is temperamental and twitchy; but for the small bore racer, the 100 should be right at home. Our range of test riders reported (from one extreme to the other) that it was "just another little buzzer that won't work until the engine hits at least 25,000 rpm," to "It is nearly as fast as most of the bikes in the 125 class."

Eliminating the obviously prejudiced big bike testers and concentrating on our 125 riders, we pursued the "fast as the 125" theory. In races against current production 125s, the 100 was quite surprising. On tight tracks or those with dry tractionless surfaces the 100 could hold its own.

For a light, small rider, this could be the right machine for the 125 class. It is only one of two bikes that, stock for stock, can be considered as contenders in the 100 class.

The RM-100B is a vastly improved bike from last year's. It enjoys the rep-

utation of reliability that the RM line has earned and proved that to us for the testing period. Absolutely nothing broke, including spokes. Admittedly we liked the handling better with the S&W shocks, but the stock ones aren't bad and should be left on until they get tired.

All in all, the bike is quite a package. Is it better than the above mentioned bike? You'll have to stay tuned to find out what that bike is and the results. ●

SPECIFICATIONS

DIMENSIONS AND WEIGHT

Overall length ..... 2,065mm (81.3 in.)
Overall width ..... 840mm (33.1 in.)
Overall height ..... 1,095mm (43.1 in.)
Wheelbase ..... 1,385mm (54.5 in.)
Ground clearance ..... 230mm (9.1 in.)
Dry weight ..... 86 kg (190 lbs.)

ENGINE

Type ..... Two-stroke cycle, air cooled
Intake system .... Piston and reed valve
Number of cylinders 1
Bore x stroke .. 50x50mm (1.97x1.97 in.)
Piston displacement..98cc (5.98 cu. in.)
Corrected compression ratio 8.1
Carburetor ..... Mikuni VM30SS, single
Air cleaner ..... Polyurethane foam element
Starter system ..... Primary kick
Lubrication system ..... Fuel and oil premixture with 20:1

TRANSMISSION SYSTEM

Clutch ..... Wet multi-plate type
Transmission .. 6-speed, constant mesh
Gearshift pattern 1-down, 5-up
Primary reduction 3.388 (61/18)
Final reduction 4.571 (64/14)
Gear ratios:
Low 2.333 (28/12)
2nd 1.750 (28/16)
3rd 1.411 (24/17)
4th 1.190 (25/21)
5th 1.045 (23/22)
Top 0.956 (22/23)
Drive chain .... Daido #428TM, 128 links

CHASSIS

Front suspension ..... Telescopic oil dampened
Rear suspension ..... Swingarm, oil dampened, spring 3-way adjustable
Front brake ..... Internal expanding
Rear brake ..... Internal expanding
Front tire size 3.00-21-4PR
Rear tire size 4.10-18-4PR
Steering angle .... 45° (right and left)
Castor ..... 59° 30'
Trail ..... 136mm (5.35 in.)
Turning radius ..... 2.2m (7.2 ft.)

ELECTRICAL SYSTEM

Ignition type .. Suzuki "PEI" (Pointless Electronic Ignition)
Ignition timing .. 6° BTDC at 11,000 rpm
Spark plug ..... NGK B-9EV

CAPACITIES

Fuel tank .. 6 lit (1.6/1.3 U.S./Imp. gal.)
Transmission oil ..... Oil bath, 800cc (1.69/1.41 U.S./Imp. pt.)
Front fork oil ..... 125cc (4.23/4.40 U.S./Imp. oz.)

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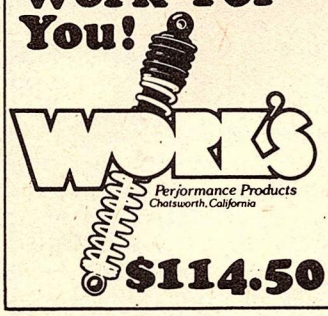

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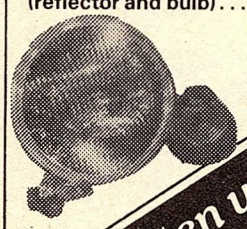

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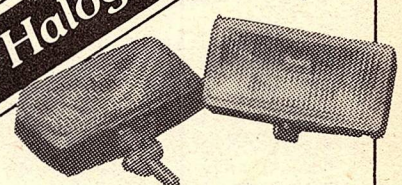

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EASTERN

(Continued from page 75)

form fitting rainsuits that are powder blue with day glo panels. Very smart.

Ordinarily you would expect races in the rain to be parades. Surprisingly there is some close competition. Times are slow but the dices are good.

Schlacter wins the Formula 1 race (Open GP) aboard his OW Replica getting down to 1:27 and coming in ahead of Mike Baldwin on his RD 350. Nobody leans over further in the rain than Baldwin. Rich gingerly squirted the OW past Mike on the short front straight midway through the race. Richard Chambers retired early with what appeared to be engine problems. Dave Roper aboard the Silk placed sixth.

Chambers had better luck with his 250 Yamaha, the one with the V-8 juice can silencers, winning the formula 2 (500 GP) and formula 3 (250 GP) events. Schlacter had some problems with his rear wheel and fell.

John Bettencourt came in first, heading a largish field of Production bikes on his GS750. Afterwards he stated that it was a fairly easy race and he wasn't pushed to his or the bike's limit.

Carter Alsop took 4th in the MS Match behind Sandy Hymes, Lynn Nathan, and Pat Perron of Perron's Leathers.

And Steve Ross led a mixed field of formula 4 (125 GP) racers to the checkers.

To the rest of the 140 odd riders with their 200 some entries, thanks for your displays of fortitude. Everybody said AAMRR racing was friendly, convivial, etc. Though the rain put dampers on things there was enough happening to support the claims made.

While I wouldn't recommend spectators to go to rainy events I can't say things were dull.

Nope, not dull at all. ●

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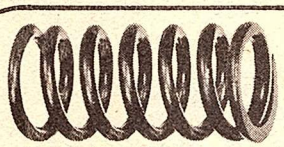

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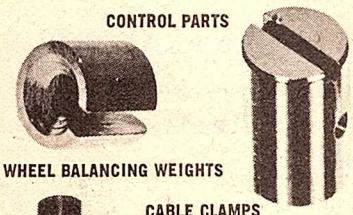

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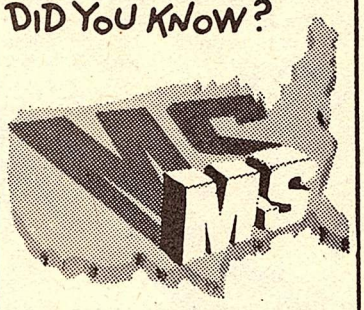

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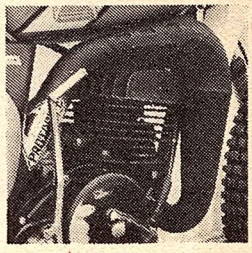

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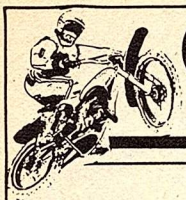

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SIX DAY DIRT BIKE SUPPLIES
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MICHIGAN

(Continued from page 17)

sel, "was a young rider-writer whose poem 'A Seized Piston is Like Trichinosis' was stolen by a local country and western band. It was a brilliant piece of work, with lines like 'my piston plunged rapidly into the bore/but the cylinder walls were worn like a whore.' Anyway, we finally settled out of court for a nice royalty arrangement and a half-dozen slightly used groupies."

The mechanical department concentrates primarily on matching rider to machine in cases where modification is necessary to obtain maximum performance in conjunction with the novice's particular peculiarities. Often a beginner's lack of riding skills will seriously inhibit his bike's ability to function in its potential mechanical efficiency.

For instance, a biker came into the shop who loved riding the immense dunes along the Lake Michigan shoreline but would only do so while dressed up like an enormous lizard because he thought that it gave him a special feel for the sand. Naturally, this caused a few problems, since the added weight made his bike a little sluggish, caused his shocks to bottom out easily, and his tail frequently got caught in the chain. The staff tackled the challenge with their usual enthusiasm. After a little porting work, suspension beefing, and imaginative welding to tail-proof the bike's hindquarters, the ridiculous riding reptile was back in the sand.

The resident mortician also deals primarily in unusual requests. There are people who were so very attached to their cycles and want to be buried with them; and there are people who were so attached to their bikes because of an accident that they *have* to be buried with them.

"The strangest funeral we've had so far," remembers the undertaker, "was the biker whose last wish to have his ashes dissolved in a two-stroke mixture and run through his bike over a motocross course. The widow was extremely upset to the point of hysteria about this because it fouled the plugs and dirtied the carb jets of her newly inherited bike."

The overwhelming success of the Motoklutz shop in Michigan has prompted the owners to consider expansion. They know that the country is full of dirt bikers with special problems who need an alternative to the impersonality of the large dealerships and unimaginative approach of the small speed shop.

After all, where can the average man in a lizard suit go for advice these days?

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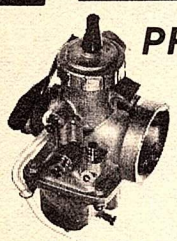

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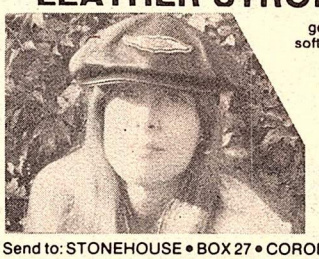

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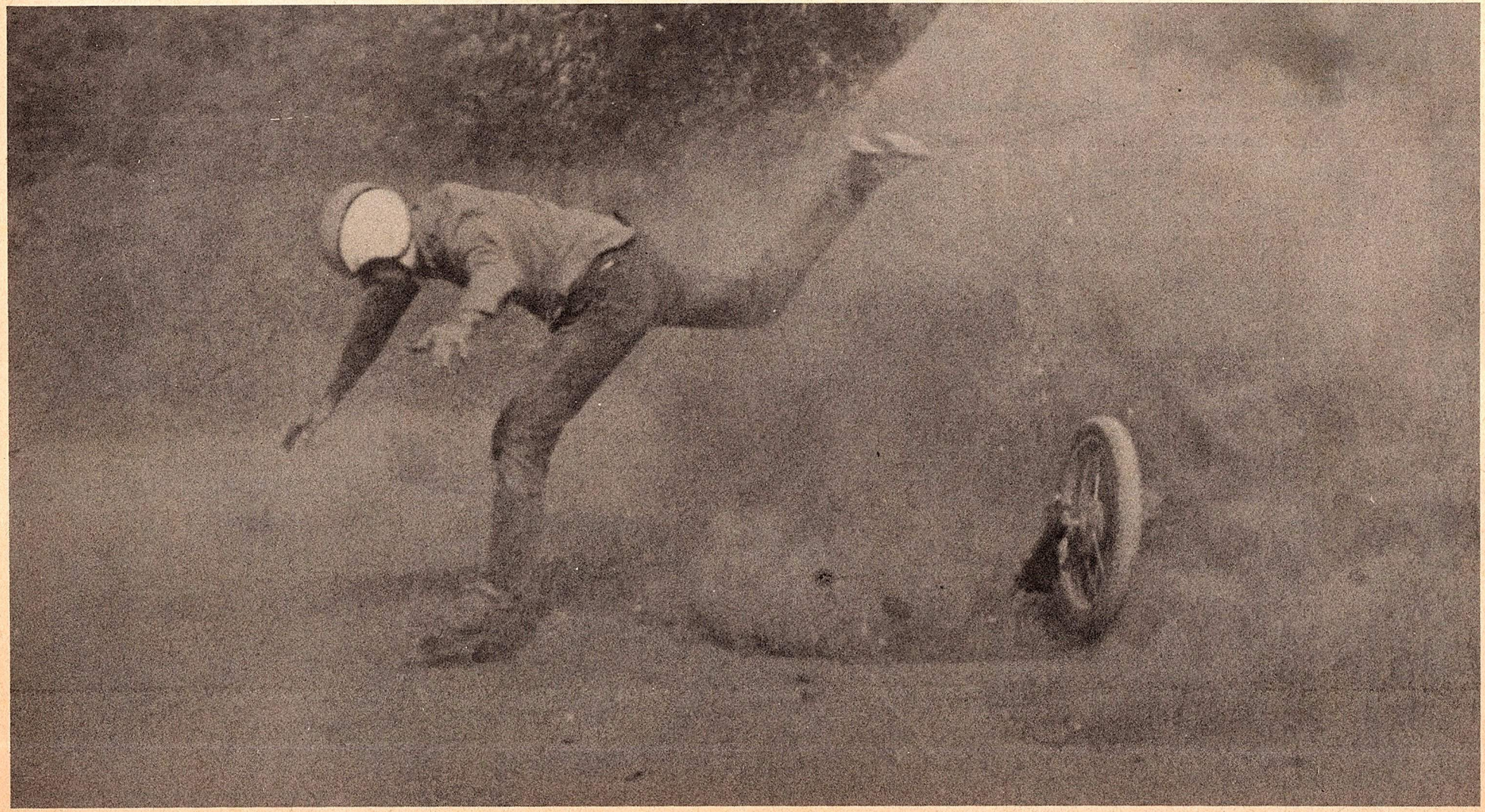

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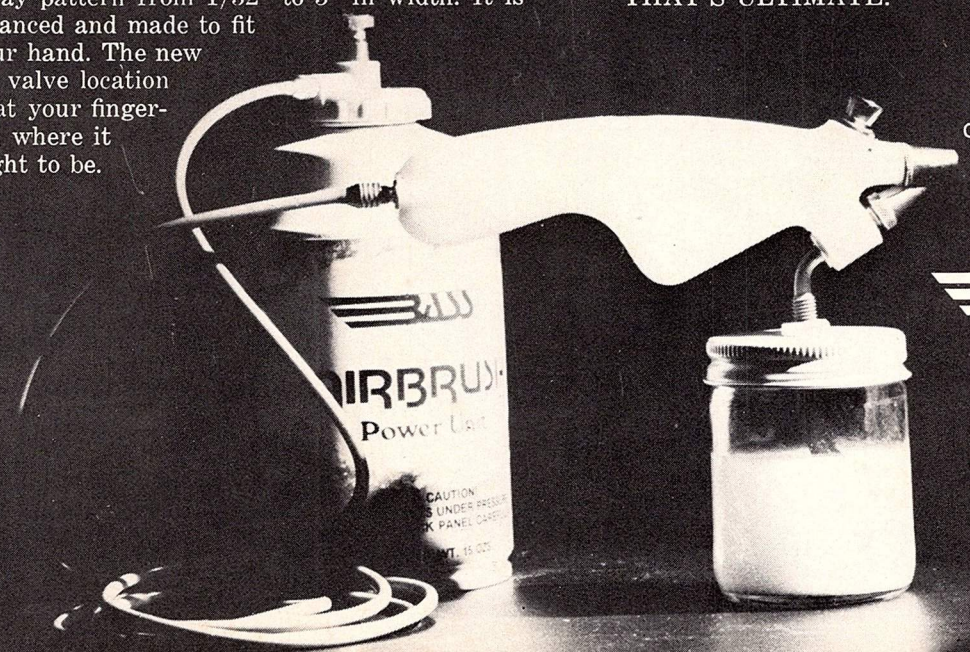

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